

1/223

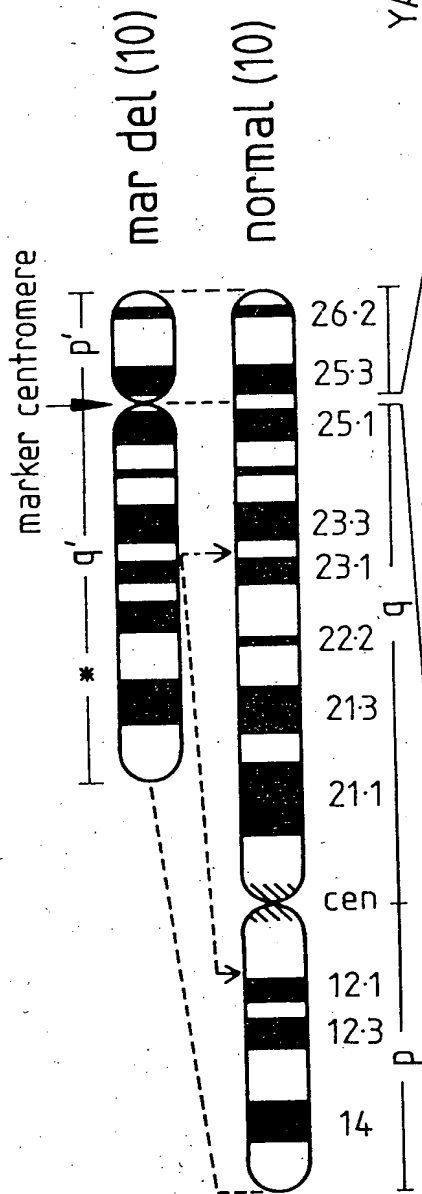


FIG. 1A

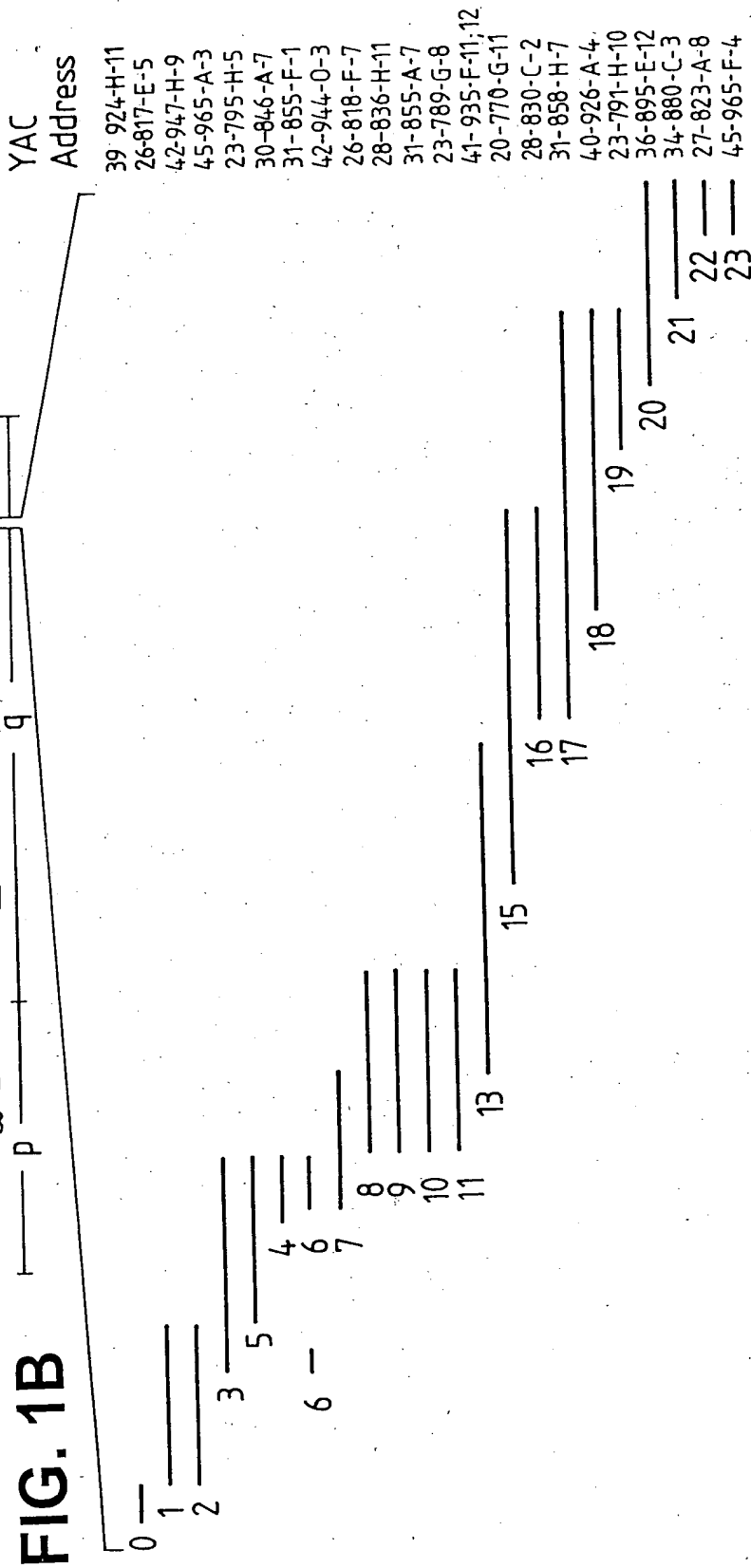
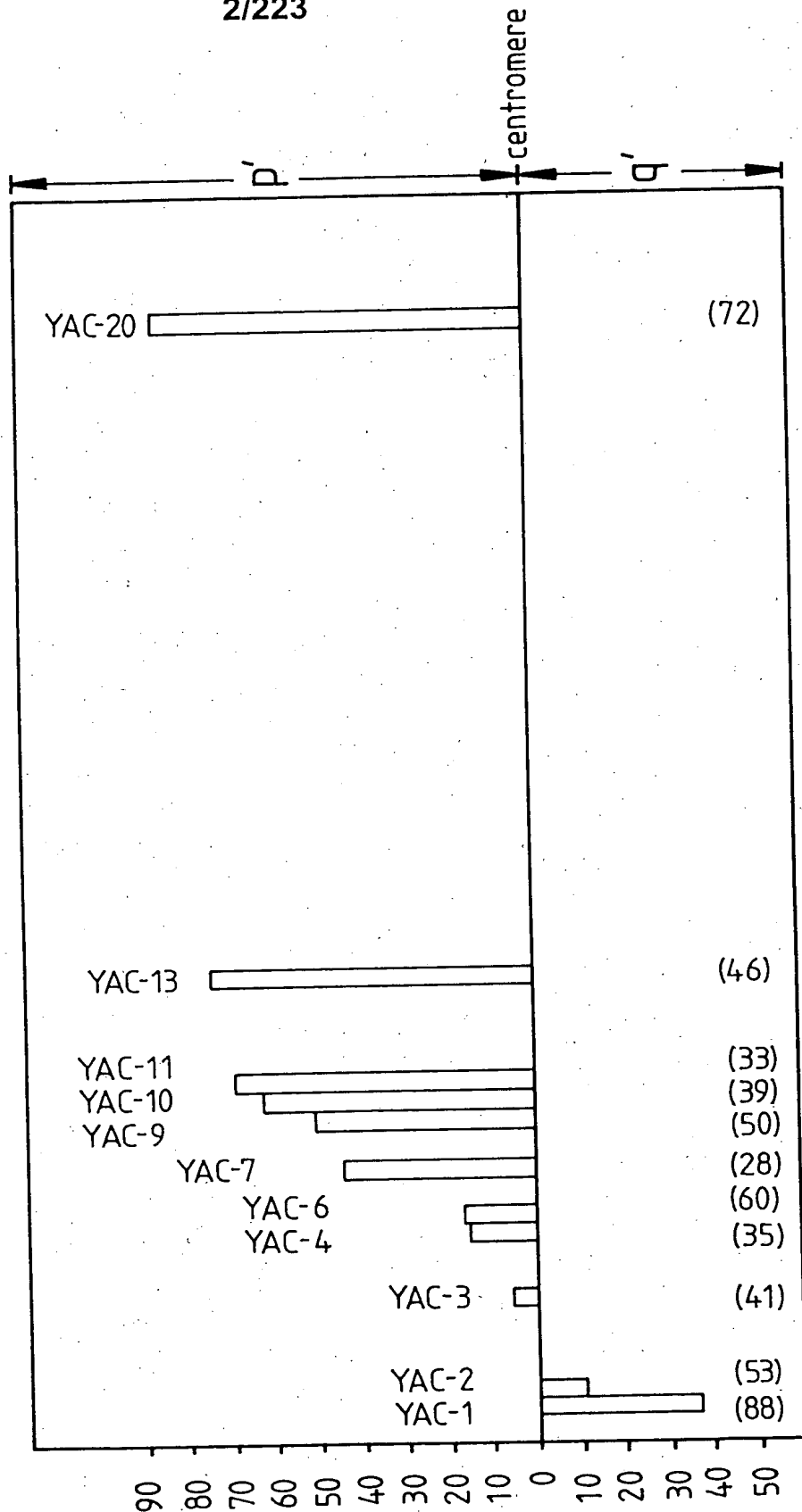


FIG. 1B

2/223

FIG. 1C





0972552 122702

3/223

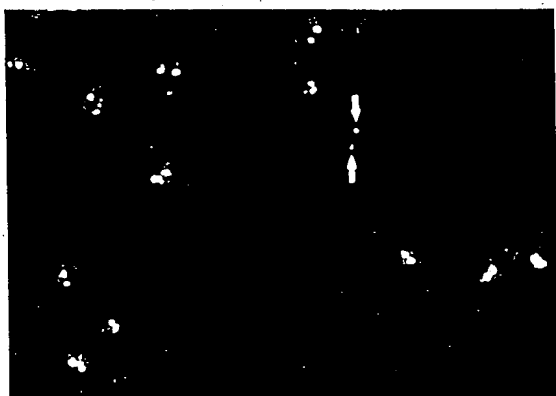


FIG. 2A(1)

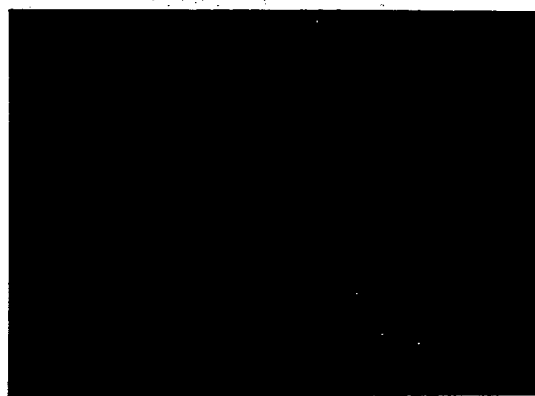


FIG. 2A(2)

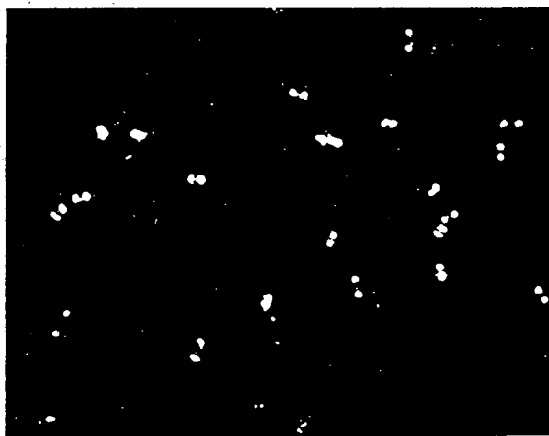
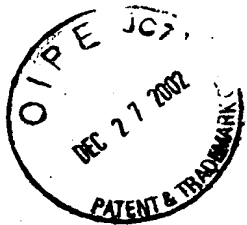


FIG. 2B(1)



FIG. 2B(2)



0972552.122702

4/223

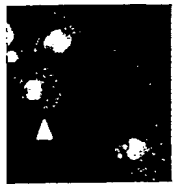


FIG. 2C(a)

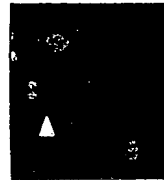


FIG. 2C(b)

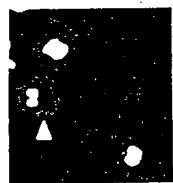


FIG. 2C(c)



FIG. 2C(d)

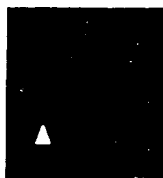
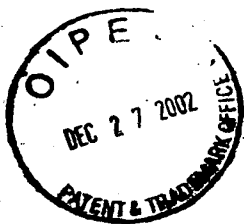


FIG. 2C(e)



0972 552 122702

6/223



FIG. 3A(e1)

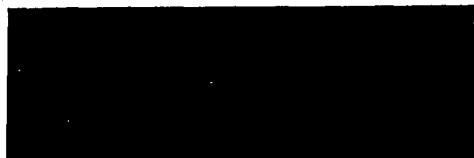


FIG. 3A(e2)

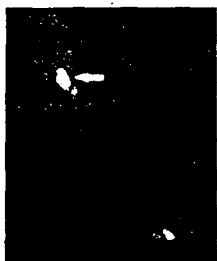


FIG. 3A(f1)



FIG. 3A(f2)

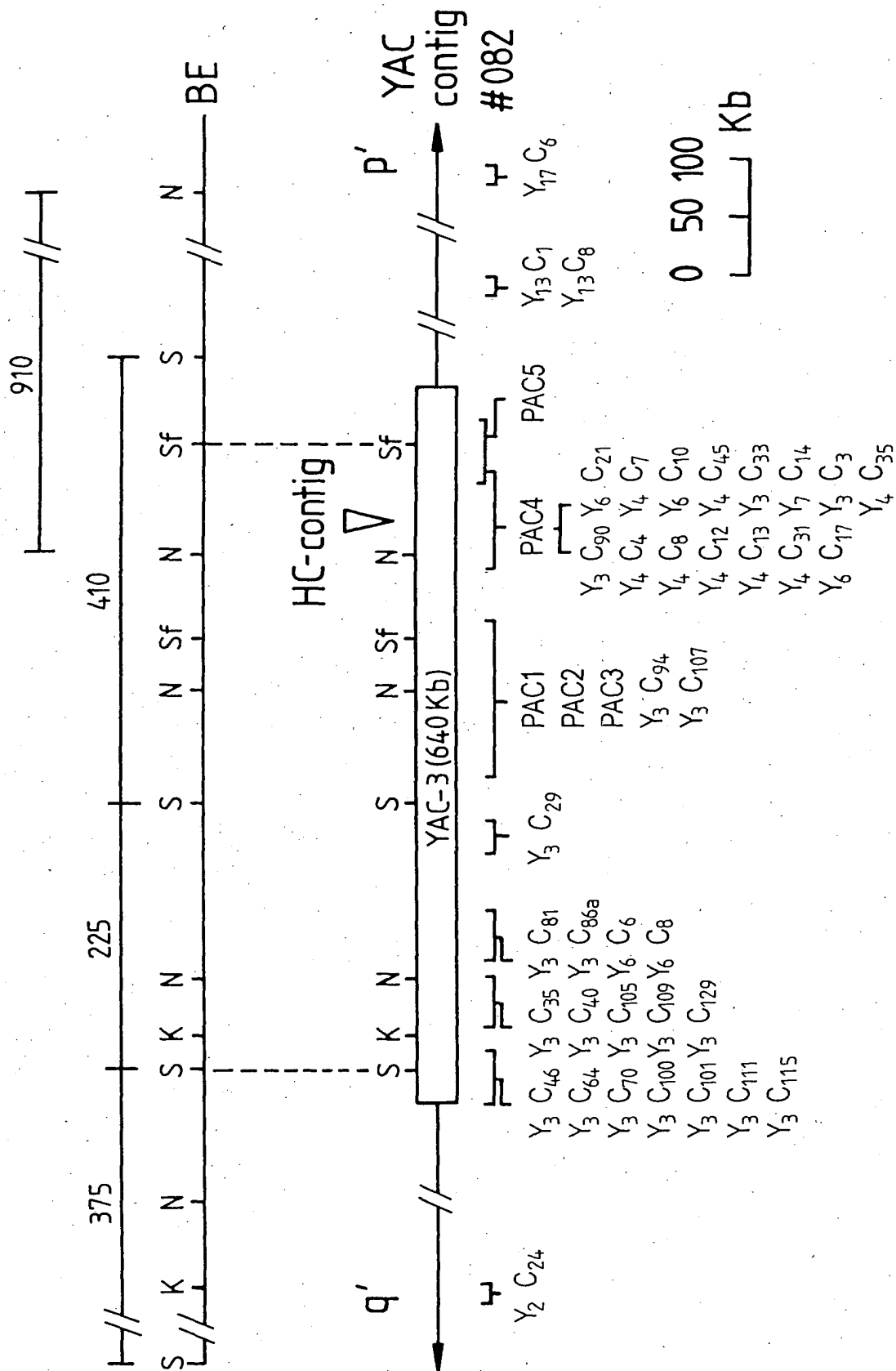


FIG. 3B(1)



FIG. 3B(2)

FIG. 4A



8/223

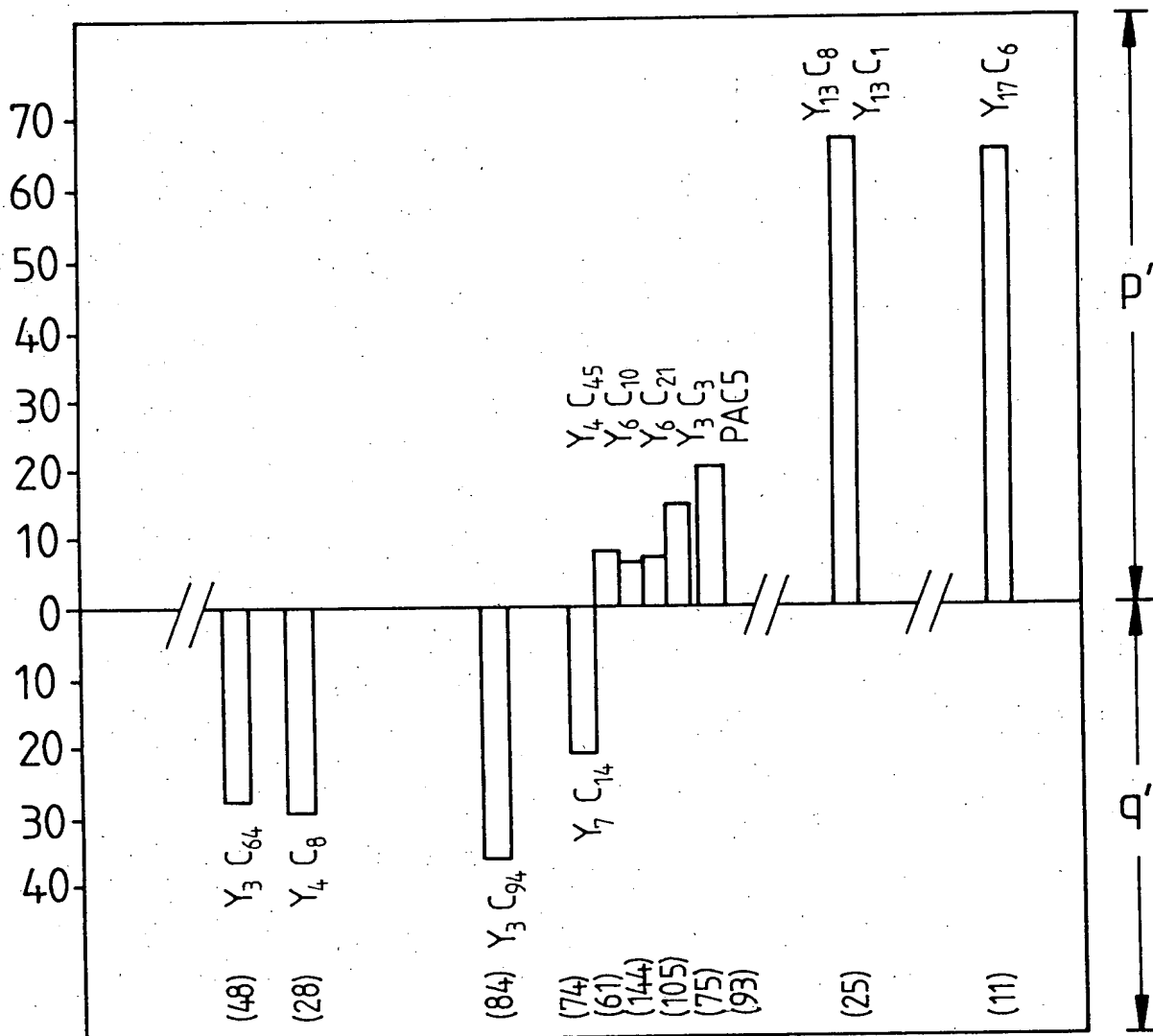


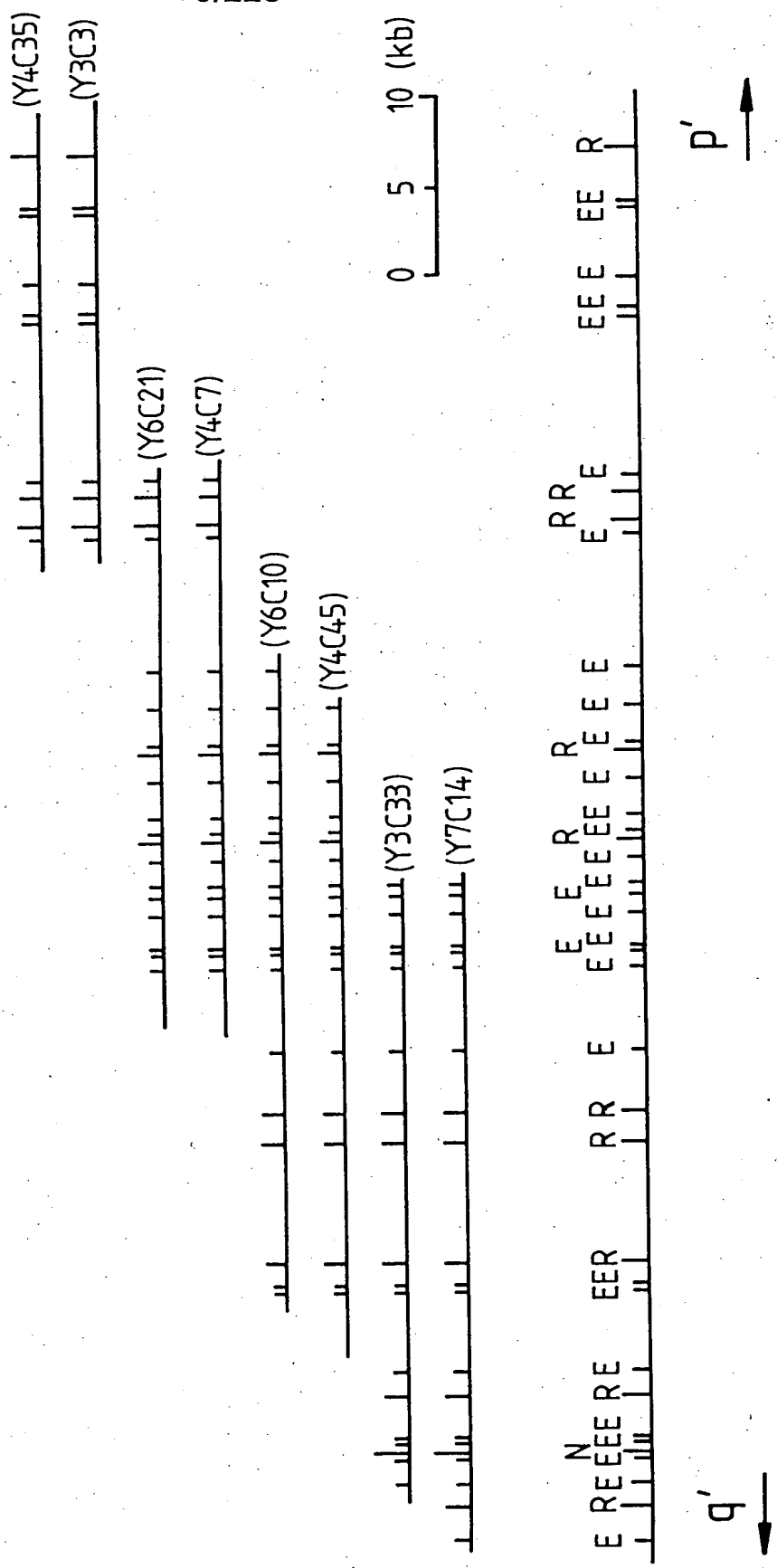
FIG. 4B



097E552.122702

9/223

FIG. 4C



10/223

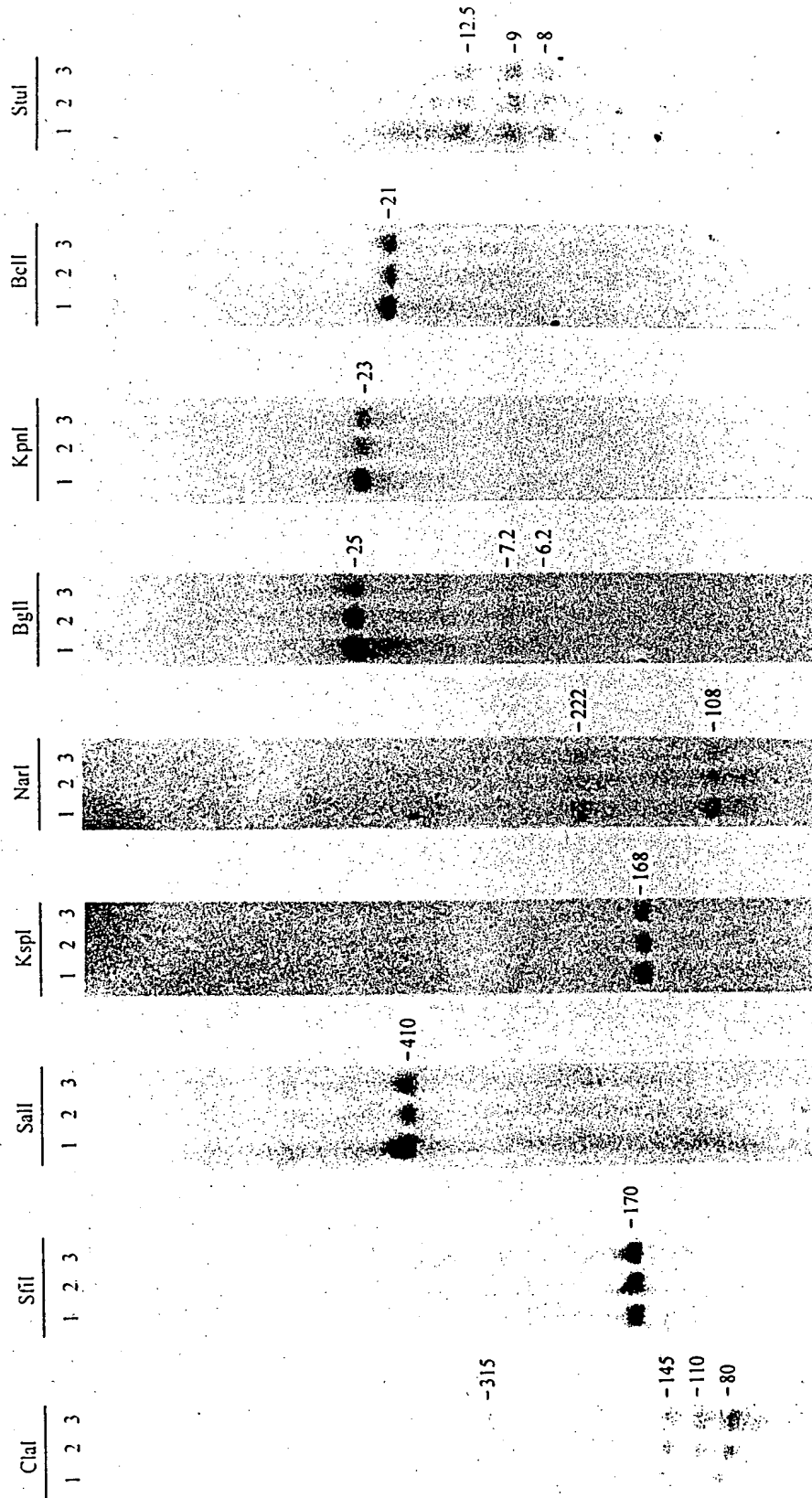
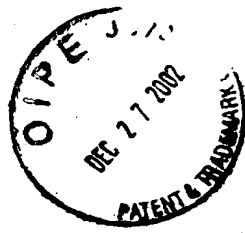


FIG. 5A



09720552.1.02702

11/223

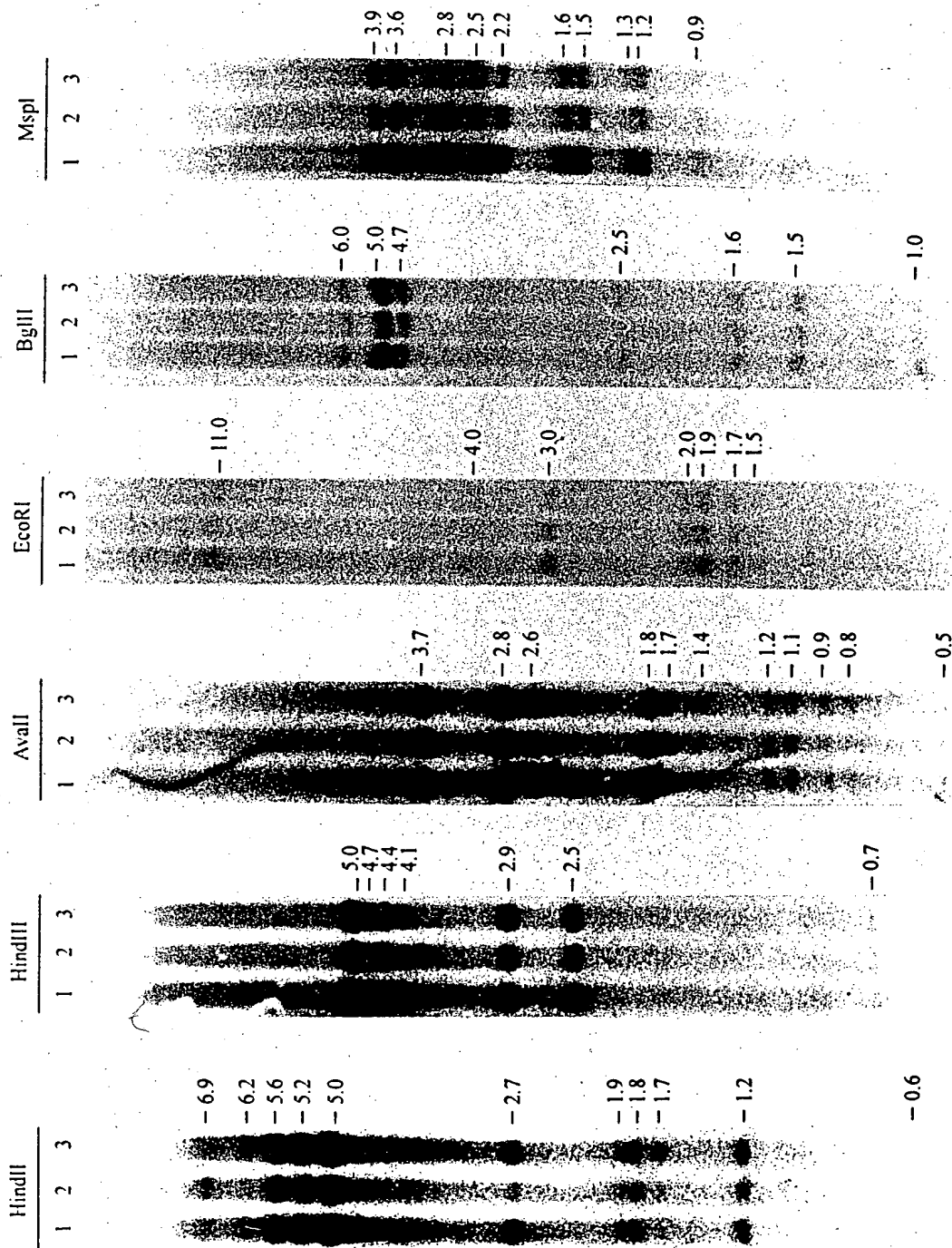


FIG. 5B

12/223

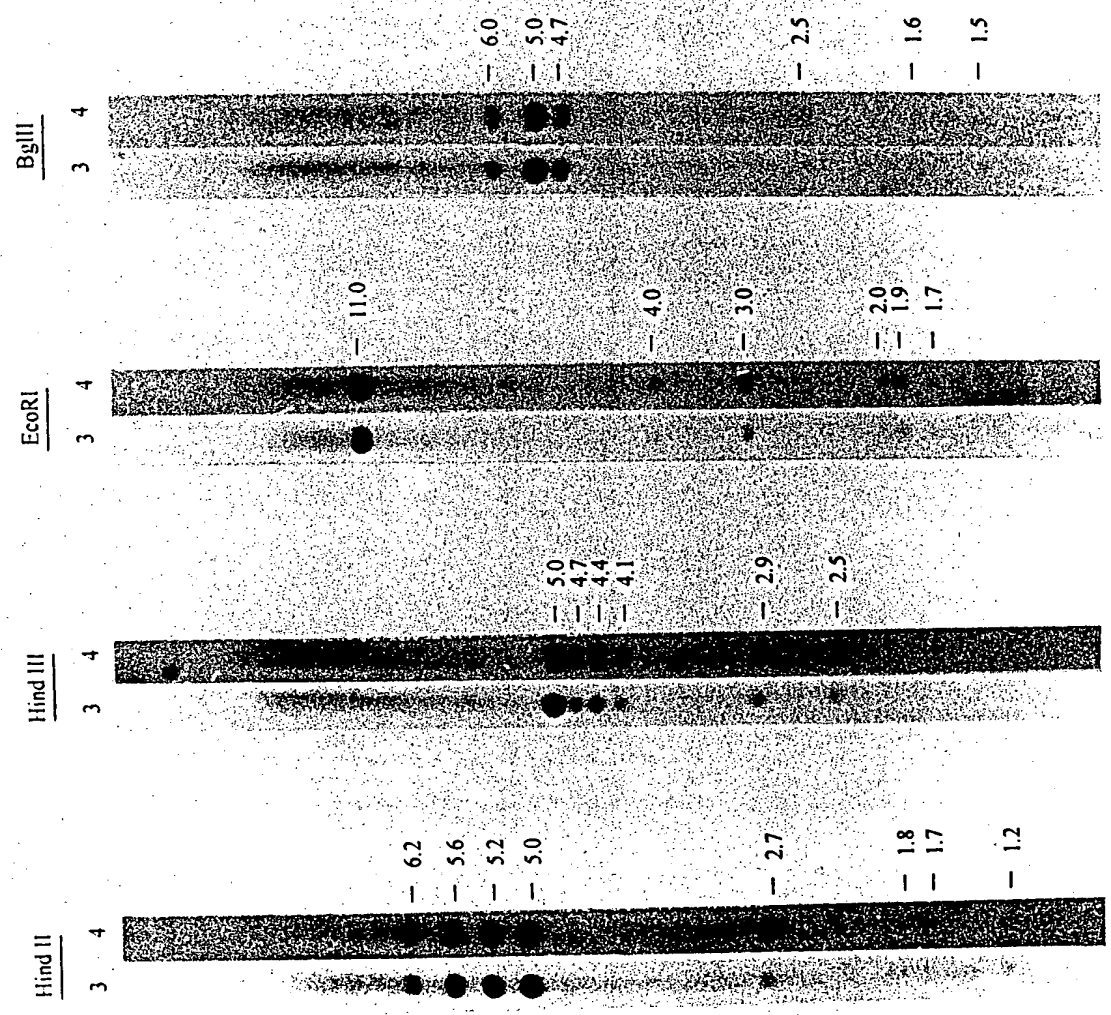


FIG. 5C



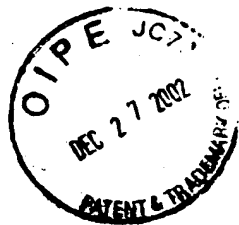
0972052.122702

13/223

GAATTCTCCT GCCTCAGCCT CCAAGTAGC TGAGGTACA GGTGCCAGCC ACCACGTCCA
GCTAATTTT GTATTTTAGT AGAGACGGG TTTACCCGTG TTTGCCAGGC TGGTATCAA
CTCCTGACCT CAAGTGATCT GCCTGCCTCA GCCTCCAAA ATGCTAGGAT TACAGGTGTG
AGTCACGCA CCCAGCCCTT CTTTCAGTTC TATCACCTCT TTTTGCTATA TTTGTATGAG
AGCTTTATTA TTAGGGGCAC ATACATTAA AATGTTATG TCTTATTGAT AGATTGATCT
GTCATTATGA ATGCTGTAT TCATTCCCTG ATAGTATTTC TTTTCTAAA TATTTTCTG
AATGTGCTG CTATTAAACAT AGCCACTCTG GCTTTTAAA ATTAGTATT TTATGGTATA
TATTTTCTCCT TTTTTTTTT TTTAAGTTT AGATGTTATG TTTCTTATA CTAAAGTGG
GTGTCTTATA GGCAGCATAT ATCTGGGTCT TGATGTATTA TTTAATCTGA TAATCTCAAC
CTTTTGTG GAGTGTTAG GCCATTACA TTAGTGTA TTATAGACAT GTTTGATTT
GCTATACCAT CTTTTCATTT GTTTTATATG TGAGCCATCT TTTTATGTT CTTTTCAT

A _____ A

FIG. 6



14/223

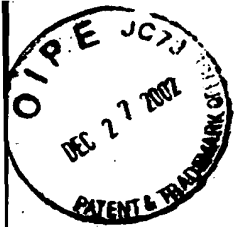
09720000 1227000

A_____

CTTTGACCAT TTTCTTTTAGT ACTGAATACT TTTTTTGTAT TTCATTATAT CTATTGGCTT
TTTAGTTATA CCTCTTAAAA TTTTTTTTTC TGTTTTATGT AGGATTTATA ATATACATCT
TTAACTTATC ACAGATTACC TTCAAATAGT ATTTTACCAG CTCAAAGTGTA ATGTAGAAAC
CTTACAAGAG TATATTTTCA TTTCTGTCTC CTAATTTTTA TGCTATGTCT ATAATACATT
AGGTTTGTTG TTGTTTGTTT TTACCTTATT GCTGTTGGCT GGGGTCAGCA AACATTTTCT
GTAAAGGGCT AGATAGTACA GGCATACCTT GGAGATACTG TGGGTTTGGT TCCATACCAC
CACAAATAA CAAATATGCA AGAAGTGGAT ATCACAAATA AGTGAGTCAC ACAAGTCTTT
TGGCTTCCCA GTGCATATAA AAGTTTGTCT TATACTACAC TGTAGTCTGT TAAGTGTGCA
ATAGTGTTAT GTCTAAAAA ACACATACCT TAATTTTAAA ATGCTTTATT ACTAAAAAAT
GCTAACAAAC ATTTGAGCAT TCAGTGAGTT GTAATCTTTT TGCTGGTGGA AGGCTTTTTC
TTATTGATGA CTGATCGGGG GTCAGGTGCT GAAGCTTAGG GTGGCTGTGG CAGTTTCTTA

_____ **B**

FIG. 6A(1)



0972052 122702

15/223

B
AAACAACAGT GAAGATTGCA ATATCAGTTG ACTCTTCCCTT TCATGAAAGA TTTCTCTCTA
GTGTGTGATG CTTTTTGATA GCATTTTATG CACAGTAGAA CTTCTTTGAA AATTGGATCA
ATCCTCTCAA ACCCTGCTCT GCTTTAACAA CCTAAGTTAA TATAATATTC TGAATCCATT
GTTGTCATTT CAACAATTTT CACAGTGTCT TCACCAGGAG TAGATTCCAT CTCATTTCTT
GAGATGGAAT CTTTGCTCAT CCATAAGAAG AAATTCCTCA TCTGTTCAAG TTTTATCATG
AGATTGCAGC AATACAGTCA TGTCTTCAGG CCTCACTTCA CTTTAAATTC CAGTTCTCTT
GCTGTTTCTA CCACATCTGT GGTCTCTTCC TCCATTGAAG TCTTGAACCT CTCCAAGTCA
TCCATGAGGG TTGGAATCGA CTTCTTCCAA ATTCTGTGA ATATTATAT TTTGACCTCC
CATGAATCAT GAATGTTCTT AATGGCACCT GGAATGTTGA ATCCTTTCCA AAAGGTTTTC
AATTACTTA GTCCAGATCC ATCCATCCAG AGGATCCACT TTCAATGCCA GTTATAGCCT
TATGGAATGT ATTTCTTCAA TAATAAGGCT TGAAAGTTGA AATTACTCCT TGATCCATTT
C

FIG. 6A(2)



097 R 0552 . 122702

16/223

C _____ **C**

TCTGCAAAAT AGATGTTGTG TTAGCAGGCA TGAAAGCAAC ATTAATCTTT TTGTACATGT

CCATCAGAGC TCTTGGGTGA CCAGGTATAT TGCCAGTGAG CAGTAATACT TTGAAAGGAA

TTATTTTTCT TAGCAGTAGG TCTCAACAAT GGGCTTAAA TATTGGTCC ACCATTCTGT

AAACTGATGT GCTGTCATCT AACTTTGTA GTTTCATTTA TAGAGCACAG GCAGAGTAGA

TGTAGCATAA TTCTTAAGG ACTTAGATT TTCAGAAATGG TAAATGAACA TTGGCATCAA

TTTAAATCAC TAGCTGTATT AGCCCCCAAC AAGAGAGTCA GCCTATTTT TGAAGCTTTG

AAGCCAAGCG TCGACTTCTC CTCCCTGGTT ACAAAAGTCC TAAATGGCAT CTTCCTCCAA

TATAAGGCTG TTTTATCTAC ATTGAAAATC TGTGTGTTAG TGTAGCCACC TTCATCAATG

ATACTATCTA GATCTCTTG ATAACTGTG CAGCTTCTAC ATCAGCATTT GCTACTTCAC

CTTGTA CTCT TATGTAATGG AGTGGCATCT TTCCTCGTAC CTCATGAACC AACCTCTGCT

AGCTTCCAAC TTTTCTTCTG TAGTTTCCCTC GCCTCTCTCA GCCTTCATAG ACTTGAGGAT

_____ **D**

FIG. 6A(3)



09720552.122702

17/223

D
AGTTAGAGAC TTGCTTTTGA TTAGATTTTG GCTTCAGGAA ATGTTGTGGC TGGTTTGATC
TTCTATCCAG ACCACTAAAA CTTTATCCAT ATCAGCAATA AGGCTGTTTT GCTTTCCTAT
TATTGTGTG TTCACTGGAG TAGCACTTTT AATTGCTTC AAGATATATT TCTTGCATT
CACAACTGG CTGACTGGTG CAAGAGGCCT AGCTTTCAGA CTATCTTGGC TTTTGACATG
CCTTCCTCAC TAAGCTTAAT CATTCTAGC TTTTGATTTA AAATGAGAGA TGTAGGCCAG
GCACAGTGGC AGGCACAGTG GCATATGCCT GTAATTCCAA CACATTAAAGA GGCCAAGGTG
GGAGGATTGC TTGAACCCAG GAGGTGGAGG TTGTAGAGAT CACACCACCTG CATTCGGTCC
TGGATGACAG AGCAAGACCT TTCTCAAAAT AAAATGAGAG GTGTGCTTCT TCTTTTGT
TGAGCCCCATA GAAGCCATAG TATGATTTTT AATTGGCCTA ATTTCAATAC TGTGTGTCT
CAGAGAATAG GGAGTCTGA AGAGAGGGAG AGAGGTGGG GAATGGCTGG TCAGTGGAGC
AGTCAGAACA CACATAACAC TAATAATTG TTTGCTGTCT TATATGGATG TGGTTGTGA
E

FIG. 6A(4)



09720552.122702

18/223

E
TGCCCCCAA CAATTACAAT AGTTACAGCA AATATCACTG ATCACAGATC ACCATAACAG
ATATAAGAAT CATGGCAAAG TTTGAAATAT TCTTGAGAAT TAGCAAAGTG TGACACACAG
AAACAAAGTG AGCACATGCC GTTGGAAAAA ATTGGTGTG ATAGACTTGC TCCATCGCAA
GTTTGCCATA CGCCTTCAAT TTATAAAAAA CACAATATCT AGGAAGTTCA ATAAAGTGAA
GTGCAATAAG ATGAAGTATG CCTGTAAATA TTTCAGGCTT TCCAGACCAT AGGGTTTCTG
TTGCAACTGC TCACCTCTGC CATTATAGCA TGAAGCAGC TATAGAAAAAT ATACATAAAT
GAGGCCTGTA ATCCCAACAC TTTGGGAGCC CAAGGTGGAT GGATCACTTG AGGTCAGGAA
TTCGAGACCA GCTTGGCCAA CATGGCAAAA CCCCGTCTCT ACTAAAAATA CAAAAATGAG
CCAGGACTAC GCATGCCTGT AGTCCCAGCT ACTTGGGAGG CTGAGGCAGG AGAATCTCTT
GAACCCGGGA AGGGAGGTT ACAGTGAGCC AAGATTGTGC CACTGCATC CAGCCTGGGC
AACAGAGTGA GACTGTCTCA CAAAAAAA AAAAGGAAAA GAAATACAC ATAAATGAAT
F

FIG. 6A(5)



09740550, 122702

19/223

F
GTATGTGGCT GTGTACCAGT ATATCCTCAT GCTCTAGCTT GCCAACCCCTT GCTTTACACT
GTCAGTTACC TTCTAAAGAG ATTAAAAATC ATAACAATAT CTATTACGTT TATTCACATC
CTAGTGTCAT TTCTTCCTTA TGTAAGATCA AATTTCATTC TGGTATCATA TTTCTTCTTT
CTAAATAATT TCCTTTAATA TTTTATTATG CACAGGTCTA ATAGCAATGC ATTATGCAAT
TCATTGCTAT TAGACCTGTG CTATAAATA GCAATGAATT ATGTCAGTTT TTATTTGTCT
GAAAAAGTTT TTGTTTTTTG AAATATACTT TTGCTGGGTA TATAAATCCA TGTTCATATA
CTTCTCTTTT CTCAGCACT TTAATGAAGT CACTCAGTTA TCTTCTGGCT TGTATAGTTT
CTCTGGCTGC CTTCAAGATT TTTTCATTGT CTTTAATTTT TAGCAGTTTG ATGTGCTAG
GAGTGATTTT CTTTGTAATT ATCCTTTTGG GGGCCTCTTA ATTCTTTGA TCCTTTTTTT
CTTTTTTTTT TTTTTTTAAT CAGTTTGGT CTGTCTCCTC AAGTGGGCTG AAAAAAAG
AAAAATAAAA TCATAGTTTA AAAAATAAT TTTGGAAAT TTTTCAGCTAT CATTTCTTCA
G

FIG. 6A(6)



09720552, 122202

20/223

G
AATATTATC CTACTCTATG CTCCCCCTCCT CCCCTTTCCCT TCTGTGACTC AAATTACAGG
TATATTAAAC CATTTTATTT GTTCACGGCA CTGGATGCT CTGCTTCTT ATTTTGTGTC
TTTCATTTTG GATAATTCT ACTGACCTAT CTTCAAGTTC ACTGATTCCT TTCTCAGTCA
TATCTAGTGT GCTCAACGCC TGTGAAGAA ATCCCTTGTG TTTAATATCA TGTTTTTTAT
TTCTAGCATT TTCATGTAAC TCTTTGTTCT GGTTCCTATC TCTCTACTCA CTTTTTTTTT
TTTTTTTTTT TTTTTTTTGAG ACAGAGTCTC GCTCTGTAC CCAGGCTGGA GTGTAGTGGC
GCGATCTCGG CTCAC TGCAA CTTCCGTCCTC CTGGGTTCAA GTGATTCCTC TGCCTCATCC
TCCCCGAGTAG TTGGAATTAC AGGTGCCAC CACCGTGGCT GGCTAATTTT TGTATTTTTT
TAGTGGAAAC AGGTTTCAC CATGTTGGCC AGGCTGGTCT TGAATTCCCTG ACCTCAGGTG
ATCCACCTGC CTCAGCCTCC CCAATTGCTG AAATTACTGG CATGAGGCAC TGCACCCAGC
TCTGCTGACA TTTTTTATCT TTTGCTGCAT TTTGCTCTACC TTTTCCATGA AATCCTTTAA
H

FIG. 6A(7)



09720552 . 122702

21/223

H _____ H
CATAGTAGTC ATAGTACTT TCAATTCCCTT GTCTGACAGT TCTGACATTC AAGCTAGGT
CTGTTAATAG CTTTGTGAGT CTGTTAACAG CTTTTTTTCA TTCTTGTC TG TGTTTGT
ATTTCTTGAT TGTATGCCAA ATATTGCCCTG TAAATAAAC TTAGATAAGT CATACTTCTA
TCCAGAAATA GGCACATTTT TTGTGTCCAG TCATTAGTGT GGAGGGAGGT TGGGGCAGTC
TAGTCAGTGG CTGAAC TAGG TTGGATTG TTGATGCTAT ACTAGAATG CACCAGACTT
CCATTCACTG CAAGAGTGG CTGCTGCGCT TTGTGATTCA TGTGAGGCCT GAATTGTGGG
TTTTTCCCTTA GTGTGTCCCT CCATGCTCAG ATTTCAGCAA GTCTTCATAT CTGTGCCACA
GAAGGAATCT GACCCATGCT CTTTTTGACC TCCCCAAGTG ATCAACTGTT GCTTGTATA
GCTTGTGATG GAGTAAGAGG GTGTTTTTTT AGTTTTCATC CTCCAGCCTT GGTCTTGGGC
CCTGAGCTCC TAGACTCCAG GAGTGGATGG AATCCAGTGA TTTCTCAGTA ATTCAGCCCC
TTCTCCAGTA GTGGCAGATC TCTGCTTTGT ATCAGTGCAA GATCCCTGGC TGAGCTCAT

FIG. 6A(8)

TTCTGCCCCTT CCTCGAGTGG CAGACAGCTC TTGCTTTTCAC CCTTCTACCA AAGGCAGTGC
ATCTTTTCTT GGGCCTCTCC CCATTGAACT TATGACTTTC ACATAAGAGA AGGGCTCATG
TATCAGAGAA TTCTGTGACT TTGTGCCACA TACAGAGTCT CTCAGTTCTC TTGCCCTGCC
CCAGTCTTTT TTGTGAGCAC CTAGTAGAGA CCTTGAGAGA AGAGCAAGGA AGCGAGTATG
GACTTCTTTT GTGTCTGTGG ATTGCTTTGT TTCTCAACTG CTACTCTTGG ACTTTAAGAA
TTCATTAAAA TTTCAGCTGT TTTCTTTTAT TCTTTTGT TTTCTTTTTT TTTTTTTTT
TTTTTAGATG GAGTCTTGCT CTGTGCCCA GGCTGGAGTG CAGTGGTGTG ATCTTGGCTT
GCTGCAACCT CCGCCTCCC GGTTCAGCG ATTCTCCTGC CTCAGCCTCC CAAGTAGTTG
GGATTACAGG TGCCACCAC CACACCTGGC TAATTTTGT ATTTTAGTA GACACAGGT
TTCACCATTT TGGTCAGGCT TGTCTAAAC TCCTGACCTC ATGATCTGCC CGCCTCAGCC
TCCCAAAGTG CTGGATTAC AGGCATGAGC CACCGGCCA GGCCTCAGCT GTTCTCTTTT

FIG. 6A(9)

FIG. 6A(10)



09780502 122202

24/223

K

K

GTTTGGAGGT TATTTCTCT ACTTACTTTT GCTGGAAATG GAACACTCTG TATCTAGTTA
AGACACATAA ACTGACTTGT GATACCATAA TGTGTGTTG AATTTTATAT TCTTAGAAAA
TCATCTGTCA AGTGTTAAC TAATGGCAAA GCATTTAATA AATCAGCATT CATGTATTCA
GGTGCTCTGA ATTATCTGAC TTTTAAATTC TTACTTTATA AATGAGAAAA TTGGGGCATG
GAAAAGTTAA CTCCTCCTAAC CCCGAATTAT TACATTATTA AGGACAGGAC TTAGAGGCCA
GATATCTTAA GTCATTAAATA TTCTTTGGCT CACAGAATTG GCAGTATAAC CTAAAGGTAA
TAACTAGGTG ATTTTCTTTT ATATCAATTA AATATGTCAG TTTTCAAATA TTCATAAGTA
CCTACTGTGC AGGAAAGAA CATGCCATAC AAAAGATGTA GTCCAGGCCT TTAAGAAACT
TTCATTTAAT GGAACTCAA GAAGTGACA TATAAGGAGG GAAGTAGCAG TATGGTACAA
GATAATACAT ACATATCAGT GAATGATATT GCCAAAAAGT GCTATTGATA GAGAAATAAT
TCATTTCTGC AAACAGCTGC TGATCTCCTA CTGAAAACAG AGGAGGGAGA ACAGGACGCC

L

L

FIG. 6A(11)

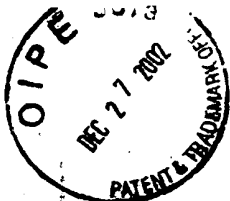


09720552 422702

25/223

L
TCGTGTCAG GATAGAAGAG AAGACCTTG AGTTGAGCCT TGAACAGTAT TTAATATTC
AAAGGTTAAG AGAGGAGAGC AATTGAGGAG GGGAGAATAG TTCCAGCACA AATGATGGTG
TACAAGATGA ACACAGTCAG TAAAGAGCAG ACTGGTCTGG ATGGAGAGGA GGATTTGCA
CATTGGGAT TACGTCATTT AGACCCCTTGA AAGCCAGGAT TGAGTAAAGC CACAGTGAAG
CGACTGGCTC GTATGGAAGC TTTATTTTAA GAAGATTAA CTGGTAGTGA CATGTGCCAA
AAACTGAATA GGAGAAAATG AGATGCAGAG AGCCCAGTTA GAACTAAGTC TGGTGCAGTA
ATGCAGGATT GAGGCAATAA ACACCAAAT ACAGTATCAC CAGATAATGG ATGTTGAAC
GGACGGTTA AAGGAAAATT GATGGTATTT GGTAATTTAT TAGATAATCC AGGGCCATGG
AATGAGAGGG GAAAATGACT AACCATAGTC ATCAAATGGT TTTTCTTAAT GAATCTGAAT
TTTGGTGTA GAGCAACATT TTCTTAGGCC TTGCCCTAGTT GGTACAGCTG ACTATGATAA
TGACTGCTAC CATGCTTGTT CCTCTTTTAG CAGCTGTGAG TCCCCCACC GCCAAACAAT
M

FIG. 6A(12)



007 2 052 1 422 02

26/223

M _____ **M**
GAGCCTCTTG AAAAGGACGA TGCCTTTTCA CTCTCTCCA AGTGCTTGGC AAATAGGAGG
CCTTTTGAAG TTA CTTTATA GTTAGGGGT CCCAGTGAGT ATTTGAAATA TTAAGTCATG
CCCGTGTTG ACAGCATGGC CCTACTGCTC ATCATCAGCT ATTAACCTTA GGCAAGTTAA
TGAACTTTTC TAAGCCCCCAG TCTACTCATT TATAAAGTGG GATTATTAAT AATGCTTACT
TCATAAAATT ATGAAGCCTG AGTTAGGTCA TTCAGATAGT GTTAGTCTG ATTCTTCGAA
CCTAGTAAAC AGTCAGTAAA CAGAAGCAA TGCCACATGC CTGATTATA TCCAAGGGGA
GAAAGGTAAA AGTGAAATTT TCATGATTTA TGGATTCAA TTATACATTT CAAAGATGCT
TTATAAGCTA TTGTTTTGGT AAGAAGAATT GAGCTGAAAC AGAATTTTCT GACAGCAGTG
ATTATTAAAT GGTGAAATAG GCTATTGATG TCTTTAGAGG ATATAGATGT TCACCTTTTG
CATATAAGTG CACAAAAATT CACTAAGTAG ATATGCTCTGT CTACACAGAG AGAGAGAGCG
TGAGAGCATT AAAGTTAGTA AACATCCCC TCGCTTTTTT TTTTGTGAGA CAGGGTCTTA
_____ **N**

FIG. 6A(13)



09720000 122702

27/223

N
CTCTGTTGCC TAGGCTGGAG TGCAGTGGTG CAATCGTGGC TCACTGCAGT CTCAACATCC
TGGGCTCAAG CGATCCTCTC GCTCAGCCTC CTGAGTAGCT GAGGTGTGCA CCACCACACC
CGGCTAATTT TTAATTTTT TTATTGTAAA GGTGAGGTTT CACCATGTTG CCCAGGTCTC
AAACTCCTGA GCTCAAGCAA TCTGCTCACT TCAGCCTCCA AAAATGCTGG GATTACAGGC
GTGAGCCACC ACGCCTGGCC AGTAAACCCC ATTCAATTAC ATCATCTTAC TTGTCCCTCC
AAAATCCTGC AAAGTAGGTA GGTTCCTGTCT TTATTTGTTA TTAGGTGAA GAACTTGAAG
TGGTGTGAG GAATAGGTGT TTTGCCAAGA GTCACGCAGC TGGAGTGGCA GAGCTGTATA
CTCTTCTGAT TCCACCAACG CTGTTTACAT CACATCTGGA GAAAAGTGCT CTGAGGCACA
GATGTTTAGT GGGAGGGATG AGACACAGGC TGCAATGCCT AAAGATAATC GGGAATAAAA
GCAGAAACA AGACGTTTGT TTCTGTATAA ATGAGACAGA AAATAAGCG TTTGTGTGTT
GGGATTGAGC ACTTGGAGAA GTGGGGAGCG ATTTGATTG GGTGAGACTG CTCCTGGAAT
O

FIG. 6A(14)



29/223

007 00000 122702

P

GTGGCTCATG CCTATAATCC CAGCATTTAG GAGGCCAAGT TGGGAGGATC ACTTAATTAA
GCCCAGGAGT TCAAGGCTGC AGTGAGCTGT GATTGCGCCA CTGCACTCCA GCCTGGGTGG
CAGAGTGAAG CCTGTCTCTT AAAAAAAAAA AATAAGTTAA AAAGAAAGAA AAGGATAGAT
GAAGTATGCG AAGATGTTGG TAATGTTGAA CCTGAAGGAA GTTAATATGT GAGTTCACCT
TCCTCTTCAG TCTTCTTTAT GTATGTTTGC CAACTTTTCAT AATAACAAT TTAAATTATA
TTTTTCCTGAT CAAACTTAG TAGCAGTATT AATCCCCTGGG CTTCCCTGACT AGAACAGCCT
CATTACCACA TGGGCAGAGT TCTGGCCGAC CAGGACCAC GTAGTGGTTC ACCATCTTGC
TCTGCTAATG TGGTCTGGGC TGAAGGGCCC TTTCTAAGGT TGTAAGATAGA AATCCAGGAA
ACTTGTTAGA ACTGCAGACC TATCAGGGTA CCTGCAGGAG GTGAGTCTAC TAAGTGAA
AAGCAGAGGG CAGAGGTCGT GATTAGCAGC TGACCGCCCC CTGCTTTTCT GTCCCTCATT
CGTGGAAAAT TGAGTGGAGC TCAATTTTGA GTGGAGCTCT AAGTAGCTCC ACTTGTAGAC

Q

FIG. 6A(16)



09711552 122702

31/223

R

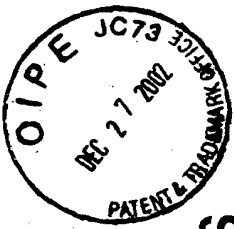
GGCAGTCAAG CATGAACACA ACCCACTGTT TGAGAAAGCTG TAAATTCTGA ATTTCTGCAG
AGTGACATC TAGGCCAGCA AATGGCAGTA AGAGTGAGGT GGATTAGCT CAGTGTAAG
ATGAACTCCA GAACCATCGG CTCTGACTGA AAGTGAAGCG GCAGCCGCGT TGTGGGAAAG
CTGGCTGGAG TCTCTCTCAT AAGCAGGCAT TCTTTTCTC CAGCCCCGTCA CTGTGTTGGT
TTGGGCCCCAC GGTAAGCCTC CTGGCCTCTA GGCTGTAACC CCCACCATCC TCCTCTGCCT
CGCCTCCAGA GTGATTGTC TGAAGCACAA CTGGATGTCA TTCCCCTTCC TGAACCTCCTA
GCACCTACAG GGACTCCATC CCTTG TGCCC CACATACCTC ACACGTAGAC ATTCCTAATG
AAGATTGAT TGAATTATTG TAAACTCAGT GCCTCCCACCT CTTCTAGTTG CCTCTCTGCC
TGCCTTTGTA CATTATTTA TTTATTTATT TATTTATTTA TTTATGAGAC AGAGTCTTAC
TGTATCACCC AGGCTGGAGT TTAGTGGCAC CATCTCAGCT CACTGCAACT TACCTCCCAG
ATCAAGCAAT CCTCCCACCT CAGCCTCCCC AGGAGCTGGG ACCATAGGCA CGTGCCATAT

S

FIG. 6A(18)

R

S



32/223

007 0000 122002

S
GCCCCGTAA TTTATTGTAA TTTTGTAGA GATGGGTTT CATCGTGTG CCCAGGCTAG
TCTTAACTC CTGGAATCAG GCGATTGCGC CGTCTCAGTC TCCCAAAGTG CTGGGATTAT
AGGCGTGAGC CACCATGCCC AGCCGCTAGC ACTCATCTTA ATCGTATATT TACTTATCTG
GCTTTCCAC CAGACTGCGG GCTCTTCAAG AGTAAATGCC ATGTTTTCAC CTTTATTTC
CCAGTTGTG GCACATTCTA GGCACCTCGC ATCATGAAAT AAACCTCTGG AGCTGTGATA
TTACAAACGT GGAAGATGA CGAGCACTCA GCAACTTCA GTGAGTAAAC AAAGGCTTTC
ATTCAGCATG ATTTATTGAC TGCCCAAATC TGGGCTGCTT CCTGCTCTGTG GTTCAAGGAG
AGCATAGTCT ACAGAACCCAG AGACCTGGCT ACTCTGGAAG TTAGACTTAA GCCACCCCG
GTCCCTGAAT GGGGAAATAT TTCCCTTCAT TCCTGTGTTT TAGGGACAGA AAGATGAGTA
ATGCAGTGAT ACATGCTGGA AATGTTTATT CCACTACCCG AAGCTGCCCTC TCAACTTAAC
AATCCATGAA AGAAACAAGA TGGTATATAA CTTTTTCTAA TTTGTGATGC CTTTGTATTAT
T

FIG. 6A(19)



09700552 . 4R2V02

33/223

T
T T G T T C C G G T T A A A A G A G G A G G T G G C A T T G A A T T G T T T G T T T G G T T T C T T C T T C
A A T A A G A A G C A T C T T A A T A T A A C T A G A C T G G A C A T C T G T C C A T T T T C A A A A T T A C A A G
T T T C G A T C A T T G C T A A A T T G T A C A G A T C C C A A T C T G T A A T T G C A T T A T T G C A T T T
A T A A A A G C A G A A G C A G A C T A G C A G T C T T T C T A A T G C A A T C C C C A A A T G C A T G A A G T A T T
A G A T T G C T T C T C C C T A T T G G T T C A T G C A T T G C T A A A G G C T T A A A A G G A T C A T T G A T T T T A
A T T A T T T A A T G T G T A C A G C A G G C T G A G C T T C C T T T C T T T T T T A A G G G A A A C C T T C A G G
G G C A T T G C T T T A G T T T T T T A A T G T T A A A T C T C A T T T T T C T T T G A A A A T A A G A A G T T A A A G
C T G T A T T C A C A C A A G C T C T C A A A G T G C C A G A T T T T C A T T G T G T T T T A A C C A T C T A G G A
A A T G T T T G A T T C T A A A T G A A A C A T T A C T G C T G A A A A T T G G C T G A A A T T G C T G G C T G G A A
A T A T T G T T A T A A C T T C A C A T G A T C C A G T T G T A T T A T T A T T T T T T C T T T T C T T T T T T T T
T G A C C C G A T A T A G A T G A A G C G A A G A G A C A A G G A G C A A T C C A T G T G T A A T A G A A A A A G G C
U

FIG. 6A(20)



0972552.122702

34/223

U

U

AGCCTGAATT GTTGTGCTG TTTTGTGAAAT TTAAGCTGGT TTTCGATTAA ATTCAGTAAA
TGGTCCAGGA CTATAAATGT TGAACATTTT TTACCGTGTG ATTTAAATTT TAGTCTTATT
GTTTTTTTTT TTTTGTGATGG TTTACATTTT CCCCATGGGA AGCAGCTATG TCATGTCGGC
ATGATTTCATC ATGGTAACAT CTCGGGTAT TTTGGTTTGT GTTATGTTC GAAAGCGGAA
TGCCAAAAAT AAAGAGTGGT TTGTGATGTC TAGTGTGTCT TCCTTTAACA AATCAAAGGC
TTTTATTAA TCCACTTAAT GGGACACTGC AGAAATTAA AAAATGGAAG TCCCATCCAC
AGAAGGCAGG TACTATGATG TAAAAAGTTT AGGTGGGGGA TTAATAGAGT GATCATATAA
TTTATGAGCT AAACCGGAGG CACTTTTTTT TTTGAGATCG AGTCTCACTG TTGCCCTAGGC
TGGAGTGCAG TGACGTGATC ACAGCTCACT GCAACCTCCG CCTCCCGGGT TCAAGCGATT
CTCATGCCTC AGCCTCCTGA GTAGCTGGGA CTATAGGCG CCACCACCAT GCCAGCTAA
TTTTTGTGTT TTTGTAGAG ATGGGTTTC ACCATGTTG CCAGGCTTGT CTCAAACCTCC

V

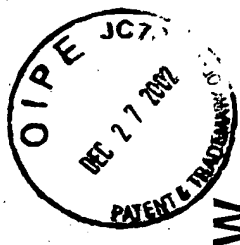
V

FIG. 6A(21)

35/223

V
TGACCTCAGG TGATCCGCC ACCTCGACCT CCTAAACTGC TGGGATTACA GCGGTAAGCC
ACCATGCCTG GCCCAGAGAC ACTTTTGAGA GTGAAGAGGA AGCTGAGAAT AATTCACCTGA
TCTACAACCTG GGACCATCCA GGGCAAGCCA GATGCCATTA CCACTAGCTA GAAAGCTTGC
CAAGGTCTCA TTTACCTTGG TATATAGCAA ATTCTTCTTT TGAATTCTGG AAATTCCTGGT
AAGTCATTGA GGTAGCTCTG TGCCAAGGAG CAATATGGTA GAATTCCTAAT ATTTCAGGCA
GACAACACTT TCCTGCATTT GTAGCAGGTA AAGGAGGTC AGGGCAGAAG ACAAACCAC
TGGGACTCGA CAAAGGGCAT AAACGTCTAA TGCACCTGAT GTAGCTGATG GTAAATTGTT
ATCAGCTAAA GATCTTTCAT AATAAATAAA CTTATCATTT GTAGGAGGGC ACAGAAATCG
TGGAAGCTG GGATTCAGGT TGCCTGTGGC TTTAATTCTG GAATCAGAAA TATTAGTCAA
GGATATCAGT CTATGAAGTA AGTTTCAAT GTTATATGCC ACAAGATGCA GCTGTCCTAT
TTTCACTTCC AGTAATTCCCT TCTGAATTAA TACACCTTAA AAATAGCTGC AGCTTCTCAA
W

FIG. 6A(22)



36/223

0972052 . 122702

W

ATCTGTGAGA ATCGTATGTG CTGCTTGCTA CACTTTCTTT TTCTCTGAAGG CTCTTTGAGG
TCTTTCAAGA ACTCAATTCA ATTCAGCAAC AATTAGGGG TCTAAGGTAT ACAGACGCTG
TGCAAGATGC TCCTGAGACA CAAAGAGGAG GTC AAGCCCC TGCCTTCAGG CACCTCTCTA
TAATATAGGA GGAGAAAGAG AAGAAACACT AATACACATA GGTAGGTGCC ATTAAAGGG
TACATACATT AAAGCCAGGT GGTAGGTGTA AGAAGATTG TAACATGAGA ATTTCTGCA
TGTTTGAAAT ATCTTATAAT TTTTAAAAAT TAAAATGGGA GATACATATA TATGTATTTA
TGTATGTATA TATGTATGTA CATATACACA CATATATACA TAAATATATA CATAAATATG
TATATATGTG TATATAGACA TAAATATGTA TATATGTGTA TATATACATA AATATGTATA
TATGTGTATA TAGACATAAA TATGTATATA TGTGTATATA GACATAAATA TGTATATATG
TGTATATAGA CATAAATATG TATATATGTG TATATAGACA TAAATATGTA TATATGTGTA
TATAGACATA AATATGTATA TATGTGTATA TAGACATAAA TATGTATATA TGTGTATATA

X

FIG. 6A(23)



00740052.122702

37/223

X

GACATAAATA TGTATATATG TGTATATAGA CATAAATATG TATATATGTG TATATAGACA
TAAATATGTA TATATGTGTA TATAGACATA AATATGTATA TATGTGTATA TAGACATAAA
TATGTATATA TGTGTATATA GACATAAATA TGTATATATG TGTATATAGA CATAAATATG
TATATATGTT GTATATAGAC ATAAATATGT ATATATGTGT GTATATAATA ATGTGTGTCA
TATACACACA TATATACATA CATAAACATT CTGCATTATA CCATTCACCT TGTAACCCAT
CTTCCCTAAA AACTGTCTCA TAAAGAGTCT TCTTTTCCCT GTACCTATGC AATGGTAAAGT
AGCAAAACAC ACATTCTTTT GGGTCCCCAT AACATTCCCT GTAGTTTGCC CTTAACAGTC
TTTGATGTGA AATTACTGT TTCTGTCTTA ACCTTGCCCTG TCTCGCGTAC ATGGAGTTT
GGCTCCTGGC TCCTAGTCTG CATCTTCACC CCATCCCCTG CCCAAGAAT CTGGTTATGT
GACCACTGCT CATCTTTTCT GCTGCCACAA CTCCAGTCCA AGCCACAAC CTCTCTCTCC
TGGA CTCTG CGGGAGTTC CTTTCTCTCC CTGCATGAGT CTATTCTCCG CACA ACTGGC

Y

FIG. 6A(24)



09720052 - 122702

38/223

Y
ATAGGTAAGT GAGACTGCGG AAGAGGCAAG TTGCAAGTC CAGAGGAAAT GAAGACTCTG
CTTGTGACA TGCTGGGTTT GACGGGTGCT GGATATCCGA TGGATGGCCC TTAAGGTGAG
CTCAAGGCTT AAGGGAGAGA TAGGGGCTGA TGATCTGAGA TTCATCAGTG TGTGGCTGAT
GTTTAAACCC AGGGACACAGG ATAAGAAGGT TATTCCAGGG AGAGCGTAGA TAAAGAAGCT
AAATGGCTTC TGGGTCCTTA GTCATTCAA ATCGGACCTC TGAGGCAGGA GGAAAGCCCA
GAAAGAGTAG ATTCCCTGGA CTCACGGGAT AAAGACTTTC AAAAAGTGGG GGCTGGCCAG
TGCTGCTGAA GGAAGTAGCA GGACCCGGAAC AGAAGGGTAA TCGTTGGACC TGGAGAACTT
GAATTGAAT TTAAAGGTTG GTAACCTTAA AAAAGAGCAA TTTTAGATAC CTTTGAAT
TATTTGCAAG ATTTGTTTGG TATATGTGTT ATTCCAGGCA AAGGACCAG AAAAGTAAAA
AATACTTACT GAACAGTTAC TGCATGCCCTG GCACTGTAAC ACCCTGTTTA ATTCTCACGG
CAACCCCTATA GAGTAGGTGT CATCATCCCC ATCTTACAGA TGAGGATATG AGGTGCAGCT
Z

FIG. 6A(25)

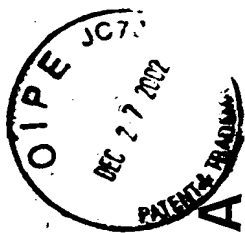


0972052 . JPR 702

39/223

Z _____ **Z**
AGATTAAGCA GTTGCCTCA GGTACACCA ACTGGTTAAC GTAGAGCTAG GATTGAACC
CGGATGGGCT GATCCAGAG CTATGCTTT AAATCGCTAG ACTGGTGCTC ACAGAAGACT
GGGACCGAAA AAAATTAATA AAAAAATAA GGAGCCCCCT GGGCTAGCAA ATTAGGAGTT
GTTCAGACAG ATGTGAAAAG GAAAGCAAGG CAGAGGGAAA GTCACGTGTAC AGAAGAGAGA
GACCCATGAC AGCAGAGACA GTGAGCTGGT AAAGTGGCTG GCGATCTAGC CCTGAAAAT
ACCTCCAGAG AGGAGGCTC ACGCCTGTAA TCCAGCACT TTGGGAGGCC GAGGTGGCA
GATCACCTGA GGTGAGGAGT TTGAGACCAG CCTGGCCAAT GGCGAAATCC CGTCTCTACT
AAAAATACAA AAATTAGCCG AGCATGGTGA CAGGCACCTG TAATCCAGC TGTTCAAGTTG
GCTGAGTCAG GAGAAATAGCC TGGATCCGGG AAGTGGAGGT TGTAAGTACG CAAGATTGCG
CCACTGCATG CCAGCCTGGG CGACAGAGCA AGACTTTTCT TAAAAACAAAC AAACAAAAAA
GAAAAAAGAA AAGGAAAGAA GAAAGAGACA AAGAAAGAAA GAGAGAAGGA AAGAAAGGAA
A' _____ **A'**

FIG. 6A(26)



40/223

09/20/2002 11:27:02

A'

GGAAGGAAGA GAAGGAAGGA AGGAAAGAAA GAAAGGAAA GAAAGAAAA GAAAGAAGAA
AGAAAGGAAA GAAAGAAAG AAAAGAAAG AAAGAAAATA CCTCCAGAGA GCCAGGTCTC
TTAGGCCCTC TGAGAAACTC ACATCCCCTTT TGATGAACAC AAATGCTTCA CACTCTCAAT
GTTATTGGTA ATCCAAGTTA TCAATATACC TAAATCACTT AGTACTGAAT CTGGCATATA
GTAATCACCT AATGAAGAGA TAAGAGTCAT GGAGTATTCT GAAGCAATTA GAATCAATAG
ACTCAATATA CACATGGCAA CAAAGTTGGA TCTTAAAAAC CGACCTGAGT GAAAAAGGAA
AGGGAAGAT ACATAACACG GTACCATTAT GTAAATTGAT AATATATGCT TACACAATT
GTAAGAACAC ATACAAATAG ATACATGTAT ATTAAATATA CTCGAACGGT TACCTATGGG
GTGGTGGCTG GAGTGGGGT AAGTCCGTAA GCTGTAATGG AACCTAAACA AATACATGAA
ACGAGTAGGA ATCAGAAGGA GTAACAATAA AAATGTGCCA TGAAGTGAGG AGTGATAATT
AATCAACTCA CTGCATCTGA GGTAAAAAT AGAAAGATGA TAATTGTAT TCTTATTACT

B'

FIG. 6A(27)



09720521 REV 02

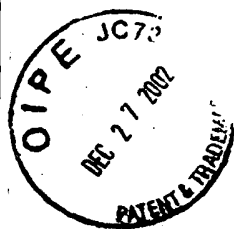
41/223

B'

CGTAGGTCTT CCACTTGCAC TCAGCTTTAC AATGTTGGAC TATCCTTCAG ATGGCACCCCT
CCTTGCACTT GCTCAGGCAG GAGAGCTTTT TCCTCCAGCT TTCTAGGTGA TTTAATATAT
CAGGGAATAA GTATAAAAAA AGGCACGGTG CTCCTTGGGT AGCCTTTCTG GACTTCAGAG
CTAAATTGCA AAGTCAGTTT TACACATGTG ATTTCACTTA TGAAATTAGG GCAAGGTAGA
AAACTGGCAC AGAAAAAATG TGATTATTAT TGGTGTACT ATCCCTTACA AGCGGAGTGT
CAGCTGCCCTC TTTTGTCCA CTGATTTAAG GCAAGATGAA CTGAAAGTGG CTATGATCAC
GTCTTCAAAA GCACACTCTG GCCCCCTCGGC TGCAGGCGCC CTGCACATTC CCCAGCTGCG
TGTCGGGTGG TGACACAGTG CATAATTGTG GCGCCTTCCT GGTGCAAACT GTCTCACTTA
GCTCCGTCCTT GCTGGCACAG CAGAAAGGAA GAAATCGAA ATGTTTGAT TTCAAAGGTA
ACAAGAAGCT GGAAAAACAAC TACTGGCCGA GTCTGAGAGT TTCAGCGGAG ACTGGTGCAG
CCTTGTGTTT TTCCACTGAC AGCTGAAAAAT GAGCCCAGCT TCAGTGAAGC TTGTTTCCCTT

C'

FIG. 6A(28)



09750552 122702

42/223

C' _____ C'
CCCTCCTCAA GGTACCCAC AATTCTCAGT TCTCTCAGGA AAGCCAAAA ATGAATTGTA
GGGTTAGGA TTGTGGTTCT TTTATCTATT ACAGGATTGA TAATATGTTC CTCCACCAGA
TGTTCTGCTT GTAACAATAC TCACTTCCTG ACACTACTGC ATATGCAGGA GTGTACTAC
CAAGGTAAAC ACAGAAATTG CTGCCCAATT CCAAAATCCCT GAACTGAGTG AGAGAAATCA
GAATTATAAT AGGGGATTCA ACAGAGCTGG CTACGGATGT GCCAGTGGTC AGATACTTGT
CTCATCATAC GCAGGTGCTG CTGCTCTAGC AACTGCTCAC TGCTTCATTT CCTGCCTTGG
TCTTTAAATA CTGCTTTTCT CAGCTCAATT GGCTTTCTTC CCTCTGGCAG TCACGTTTCT
TTGGGTCAA CAGCAAATGA TTCTTTAGAA TCACCTGGTA CTCAAAGGAG CTACAAGACA
TTGGGCATCC ACTTCCACTC TCTTGGAAAA ACAATTTTAT GGAAGCCAAG GTTGCCATAG
TGCCCTCTTGA GGTGTGTTGC TCAGCCAAGG CCCAAGCTTT GTGCTTCAAA CATGAAATTA
GAGAGCTTCA GAACAAGATC CACATTTTCA ATGGCCTCAC CCAACTGGAT AAAAGAACAA
D' _____ D'

FIG. 6A(29)

D'

TTGCCATATC TCAATGACCA CCTTTTTCAG GTGGGATGGT AGATGCTGGA ATGGGTCACA
GCATTGCCCA ACCAAACTTT GCAAAAAAGG CTGGAAGCTC TGA CTGGGGA CCTAAATAT
GCAAAAGTTG ATAGGCTCTT CATGCAGAAT ATGAACCCCG TGTATGGATA TAGCTAAAGG
GTGGCCCTT ATGTTTCTAT TCCTTCACAA ACCTGGTAGA ATAGATATGC TTGTTCCCT
TTAAAAAATG TCAACAATTG CATTATGAT GCTGTGTATA GTAACTCACA GATCATGCTC
CATGAAAATG CTTCAGAAC CAATATAAGG AGATTTTTA GCCATGTGTG ACAAAGAGA
GGCCATTCA GTGTGAAAT TGTTACAGAGA AGTATTGAT TATGTTTCT CAGATCTTT
TATTTTATT TTTTGTGAA CAGAGTCTCA CTTGTGCACC CAGGCTGGAG TACAGTGGCT
GTGGTCTCGG CTCAC TGCAA CCTCTGCCTC CCAGGTCAA GCGATTCTCC TGTACGCTC
CCGAATAGCT GGGATTACAG GCGCATGCAC CACCATGCCT AATTTTGTG TTTTAGTAG
AGACAGAGTT TCGCCATGTT GACCAGGCTT GCCTTGAACCT CCTGACTTCA GGTGATCCAC

E'

FIG. 6A(30)

43-A/223

09720557, 122702



E'

CCACCTCAGC CTCCCAAAGC ACTGGGATTA CAGGCATGAG CCACCGTGCC CAGCCTGTTT
TCTCAGATCC TGTATTGTT TCTGAAGCCT TCATTCTAT CTCTTATTC ATTTTGAAG
TAGTACACCT AGTAAGGTT TTTAACAATC AAATATCTTT GGAAAATTCC CTGGTTCCCT
TCTTATTCCT ACAAAAATAT GTTCAGTATA GCTGATGTTA TGTTTCTTTC AAATTATCA
TTTCTCTATC TCAGAAATTA TCTCATGCCT AATTGTTATT GAATAGTCTT CACTTCTTGT
CATCCAGTTT CTGGTCTCTT ATTTCACCTT AAGCTAAGT GGCTATTAGA ATAAAGAGCT
TGTAACAGAT TCTTTCCTCA ATATGTCTTA TCTTTTGA CTATGCCAGT GACAAACTGT
TAACTGTTTT GATTCTTCAT AACATTCCAC AGAACATGCT GACTCCTCTC TTCCCTGAAAG
CAATGCCCAA GCACAGCATT GTTAGATAGT ATGTACGCAA CAGGGACATG GGTGCATAGC
AAAAACTAGA AGGAAGGAGG ACCTTCCTTA GCAATGGTG ATATGTGCC TGGACTTAGA
CTCCAAAGG TCGTGAGGTG AAACACACAT CGTCCATACC CAGGAAGCAC ACAGGTGGGA

F'

FIG. 6A(31)





09720552 JAN 2008

F'

TGGAAGAGCT GTGCCTAATG AACTTCATC CACGTGGAGG TGGAGGAGGC TGCAGCTGCA
AGAACTCAGA GCTGCCCTTAC CCAGACCAGG GACCAGGGAG GGCTTTCTGG AGGAAACAGC
CTCTGAACTG CCAGCTGATA GAGGAGCTCT ACCTCAACTC TTCTGGTTCC CCAGGGCTGC
TTTTCCACGT CCATTTATG GCACTGAAGT TTGAATACCT TCAGGGGCC GAAAGCCTGC
CAGGTCCTCT TCTCTGCAGA GCAATCACAC CAACCTGCAA AGGCTAGGA AAGGGCTGTC
ATCATCTCCT ACTCAGAAAC TGGTTCACTG GAAGGACTCA GGGCCACTG AATACATCCT
GGCAGCTTTC ACAAGAAGG CTTCTGACTC AAGGATGTT CCATCTTTGC CAGGTCGCCT
TTTCTCCTTC TCTTAGAGTT TGGAGGACGC AAATGTGCTG AGAAGTCAAC CTTTCCCTGCA
AGGTGAGACA CAAGGCCTT TCCCAGCAGA AAGAAGAGAG CAAATGGAAG GTCCTTCTTC
CTCCAGTAGA GGATGGACTC TGTCTGGCAG CCACCCAACA GGAAAGCAC AATGCATGCC
TGCCCTGCTTC CCTCCCTCCC TCCGTTTCTC CCTCCCTCCC TCCTTCCCTCC CTTCCATTCT

G'

FIG. 6A(32)

G' _____

CTTCCCTTCC CTTCCCTTCC CTTCCCTTCC CTTCCCTTCC CTTCCCTTCC CTTCCCTTCC
TCCCTCTCCT TCCCTTCCCT TCCCTTCCCT TCCCTTCCCT TCCCTTCCCT TCCCTTCCCT
TTTCCCTTCC TCCCTTCCCT CTTCCCTTCT TCCCTTCCCT TCCCTTCCCT TCCCTTCCCT
CCCTTCCCTC CTTCCCTTCC TCCCTTCTTC CTTCCCTTCC CTTCCCTTCC CTTCCCTTCC
TTGGAGTCCA TTCTGATTAT GCTGTAATGT CTGCCCCCTC CTCTTCTCTG TCAAAAATG
AAAGACATGG AAGCCACTTG CCTTTTACTG AATTAAAAAT TAGTAAAAGA GCTAAAAATT
AATGGTTAAA AATGTACGCA TAAATTATGC AGTATACTAA CCAATGAAAA GATACACTTC
TCTTAATTAA AAGCTGACAG GGAGGAAAC AAGAAAAGAG AAACACAAAA CAATAATCTA
AATGACCTAT TAGTTGGAAG AACACATCA GAGAAAATAG ATACTGTGTA TAGTCATGTG
TATGTCATG GAATAACATT TGTAGAGAAA TCTGGACTGA TCCTTTCTGA GTAAAGAGAG
CTGTGGGTAC AATTAAGGGG AGATTGAAAG GAATCCAAAA GCATAGCAGA TGCTGTGCCT

H' _____

FIG. 6A(33)





00710552.122702

46/223

H' _____ H'
CACTGGAATG GTGCCGATC TCCTCCAAAC TATGAAGTGT TTGAGGCTCA ACTTTAATAT
AATTAAGATA CAAAGACAGA ATGAGAGAAA GAGAGAAGGG AGCTCACTGG AAGAACACTC
AAGATTCCTT ACTACTCATT CTCTAAAATT ACAATTGTTC TAGATGGAAA AGAAAAAAG
CTTCTCTGTT AAAAAAGGAG CTTGTGCTAT AGGAGGTTTA AAATATACTT CTGACCCATC
TCCAACATTC TAAATCCTTC CCAGAAAAGT ATGCCAATCC CAAGAAATAT TCAATCAAAT
TGCTGGAAAG AAAAATACAA AATATTAAAA TGTATTAGGA AGCAGACAGTA ATTAATCAG
AACTGGAGCA GGAATAGACC AGCAGATCAA TGAGACAGAC ATCAAGTCCC GGAATGTGGA
CTTGCAAATG CATTAAGTAA TATGATATGC AATAAAGGTG GCACAGTGAA CCAATGGGAA
AAAAATTAAT CTTATAATAA TTGATATTGC AATAATTGTC TAGTAATTGG GGGAAGAAAT
AAGCTTATTC CTTATCTCAT TTCTTTTTTT CTTTTTGAGA CAGAGTCTCA CTCTGGTAGC
CCAGGCTGGA GTGCAGCGAT GCGATCTCTG CCCACTGCAA CCTTGCTCTC CCGGGCTCAG
_____ I'

FIG. 6A(34)



0972052 . 122702

47/223

I' _____ J'
GCGATTCTCC CACCTCAGCC TCCCGAGCAG CTGAACTACA GCGGTGTGCC ACCACTCCCG
GCAATTTTTT TTTCCATTTT TAGTAAAAAT GGGGTTTCAC CATGTTGCCT GGGCTGGTCT
TGAACTCCTG GGCTCAGGCA ATCCACCCGC CTTGGCCTCC CAAAGTGCTA GCATTACAGG
CATGAGCCAC CGCGCCTGGC AGCTCATTTT TTAGACTAAA TAAATTGGAG ATGGCTAAAA
GATTCTATG TAGGCCAACT ATGTTTTTAA AAAGTTTTTT TTTTAAGGAT ATCTGCTGGA
ACCAATCATG CCACCAACCA AAGATGCAAG ACTATAAAC ATACCCAGTT TTTCAAAGCA
TTTAAAAATT ATTCTAAAAA TATTTTTTCT CCAGAAATTT TGCATTGATT CCCTGAAGAA
GCATTATAT GGGACCTGAC TTATAAAATG ATGAACTCAA TCTCCCCACT CAAGGTAGGA
GTCTCTCAGA TTAAAAAAT AAGCATCCTA GTCCTCTTGT CCTGTAAAA GTTAACCTT
ACACCTGAAA CACCAGGAGA CTGGCGGTG TTGTCATAGG GGTACAATT AAAGTTGAGC
TACCTCTGAC ATCTATTAAC ACCAAAAATTA GTAAACTATG CATGTATGGA GACTTTTATG
J'

FIG. 6A(35)



0972052 . JAN 702

48/223

J' _____ J'

ATTGAACCTG TTTATTGAGT CAAGAGATAT AGTTTACAAT GAAAAATTGG GGCATATCAA

AATGACCCTG GCTTAGCTTA GCATTGCTG ATGTTAACTA TTTTCTTCAT TGGGCTGATT

TTAGTTGCTT AGGAAAAATA CAAACACACA CACTTTAAA TTATATTAAA ATCCCGTCCT

AAACCTCAGA GTCCAGAACC GCATCCTAAC ACTGGTCATG CATAATATGT TTAAATTTT

GTGCTTTAAA AACTACAAAT AAGGAATGTA TTAATAGTTC CACAATCAAT GGTCAAGTTAG

CCGAGGGAAG ATTAGCATAG TTAAAGACTT AAAATGGCTT TACAACATAT ATCAAAAGGA

CAAAATAAGG GGAACAGAGT CTAGAAATGA GGAACCTGG ACACAGGCAA AAAAAAAAAA

TGAGAACTGG GACATGAATA ACGCAAGGGA TAAGACTAAT ACACAAAACA CCCCAATAA

ATAGCCAGCA TTTGCTGAGC TCTTACTGTG AGCCTGTTCT AAGCACTTA CATATATTAA

CTCATTTTAT CCTCAAGGAA CCATCTGAGG CAGGCACTGT TATCATCTCC ATTTTACAGA

TAAGGAATAG ACCCAGAGAG GCTGAGCAAC TGGGCCCTATT CCACAGCTAC TATGGTGGAG

_____ K'

FIG. 6A(36)



09720552 . 122702

49/223

K' _____ K'

ATGAGATTTA AATCTAATCA TTGGCTCCAG AGCCCATGCA CCAATGGCT GCACTAAGTG
AATGCATGCG CTATCAACGT TGCCAAAAGT GGGCCACAGC TCGGATCTGC GTTTTCCAGT
AGCCAAAGCA GAGAGTGTGA TCAGACCTCA CTTAATAAG CAAGTCTCAA GCCAGAGAGA
GGTGGTATCA GGCAGCAAAC AGGCTGCTAG TCGAAATCCC ACTTCTTCTC TGAGTGGTCC
ATACAGTTTT ACTCTACTTG CTTACAGAAAT GAAAATAGCT GGAGTTCAGG TGCGCTTTCA
ATGCCCTGTT GTCAGGATTG GGCTTTTCAA GTTTATTTT TGTGTGTT TTTAATAGAC
TGTACTTTTT AGAAAATTTT TAGATTTACA GAAAGATTGA GAGGATAGTA CAGAGAGTTC
CCGTATACCT CACACCCAGT TTCTGCAATT ATTAACCTCT TACATTCA TGCGTACATTT
GTTACAATTA ATGAGCCAGG GCCGGCCGG CACAGTGGT CAGGCCCTTA ATCCCAGCAC
TTTGGGAGGC AGAGGCAAGC GAATCACTTG AGGTCAGGAG TTCGAGACTA GCCTGACCAA
CATGGTAAAC CCTTCTGTGA CTAAAAATAC AAAAAATTAG CCAGGCATGG TGCTGGTTGC

L' _____ L'

FIG. 6A(37)



09720552 . 122702

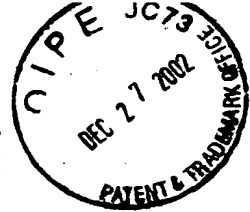
50/223

L' _____ L'

CTGTATTCCC AGATACTCAG GAGGCTGAGG CACAAGAATT GCTTGAACCA GGGAGGCGGA
GGTTGCAGTA AGCCGAGATC GTGCCACTGC ACTCCAGCCT GGGCAACAGA GCGAGACTCC
ATCAAAAAAA AAAAAAAAAA AAAAGAAGG AAGGAAGGAA GGAAATTA TGAGCCAATA
TTGAGACATT ATTATTACTA AAGTCCATGC TTTATGCAGA TTTTCTTAGT TTTTACCTGC
TGTCATTTTT CAGTCCAGG AATGCATTCA GGATGCCATA CCACATTAG TTCTCATATC
TGCTTAGGCT CCTCTTGGCT AGACTGAGTT TTAATCTACT TTCTGCAGAG CCTGAGAACT
TTAGCATAAT TTCCTTGGAA ATTACAGCTC AATATTTTCA AGCACTTATA CAAACAGCCT
AATGTTACGT TGGCCCATAA CAGTGTTTCA AGTAATAAA CTTCTTTGTT TTCTGTGCCG
ATTGAAAGAA CTGCTGCTTA GCCTCCTGCC AGATGATGAA CTGGGTACAC ACGAGCATTT
TTCCAGGTAA AGCATATTTC GTGCGACTTC TTAAGCTGCA GCCTTATATG CAATAATTGT
CCATTTACAA GACTTATGTT CGAATTTCAG GCACTCTGTT TTCACTAACC ATATCCTTCA

M' _____ M'

FIG. 6A(38)



0972052.122702

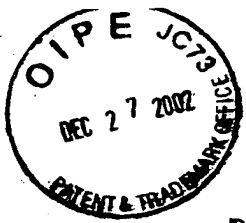
51/223

M'

ACTTTGATAA GTACTGCTTT AATCAACTCA GAAAATTAA CTGACTAAT TTTTTTCAC
CATCAGTTT TTTTCGTGTTG ACTCTTTCTC CTTTTTCTGT TTGCCCAGAA ACATGCTCAG
GATTCTCTCA GGCTTTAAAA AATGAAAAA TGTTCCCTGC AATCTAGTTA CTCCTTGATT
CTCTTGTTCT GTTTATCGCT GGAATTCTTG AAAGCTTGGT GTATTAGTCT TTTTTCATGC
TGCTGATAAA GATATACCTG AGACTGGATA ATTTATAAG AAAAGAGGT TTAATGGACT
CACAGTTCCA CGTGGCTGAG GAAGCCTCAC AATCATGGTG GAAGGCAAA GGCATGTCTT
ACATGGCAGC AGACAAGAGA GAATGAGAAC CAAGGATTT CCCCTTATAA AACCATCAGA
TCTTGTGAGA CTTATTCACT ACCACAAGAA CAATATGGG TAAACCGCC CCATGATTCA
ATTATCTCCC ACCGGGGCCC TCCACAACA CGTGGGAAT ATGGGAGCTA CAATTCAAGA
TGACATTGG GTGGGGACAT GGCCAAACCA TATCACCTGG CCTATAGCAT TATTCCATT
TCTTCCCAT CCTTTATTC CTCAAACCGG TACAACCAGA CCTCTTTTT TTTTTTCTA

N'

FIG. 6A(39)



09720552 . 422702

52/223

N'

CCTGAAGCTG CTCCTTTGAG GGTAGCTGAT AAGTCCAAA TACTGTCACC TTTTCTCAAT
TCCGTTCCCTT CTTATGCCTT TGGAGCAATT GACTGTGTTG GTTGCCCCCT CTTTAAAGT
GTCTCTCACT TGGTTTATG ACTAATGATG ATTTTCTTTT TCCTCTCTAA ACATTCCGCT
ATCTTTTAG CTTCCTTCC CCTCCCATC CCTAAATGT CCTGTGTTCC CAGAACTGC
CTCACCTCTT TGACTTCTCT ATGCCCTGTC ATTCACATCAT GGGTCTTTAT TACATTATTG
CATCTGTGTC AATAACTCTG GTCTTTCTGT TAAGTTCCAG TCCTCCCATTT TCAAAATGTC
CCAGACATTT CCAATTGAGT ATCTCTCCAA TGTATTTAAC CTGCTAAATA TCTAACACAT
AATCTTTCCC ATCAAATCGT TTCCCTCTTAA GCTTTTCGTT ATTTCCCTATT AGACTCCTGC
ACTTCTCCCA GGAGCCAGA CTAAACCT TGAATTCTC ACCATAACCT CTCCTTTGTC
TCCCATAATC AATTAGTAGC AAGTGTTATC AATGATTACT TGACAATATC TTTTCTCTATT
TCCCTCCCTG CTATGATCAT TCATCTAGCA AGAAGAGTTG GCCCTTTGTA TCTGTGGTTT

O'

FIG. 6A(40)



09720552.1P/2002

53/223

O' _____ P'

CTGCATCCCT GGATTCAACC AACTGTAGAT GGAAAATATT TGAAGAAAAA AGCGTCTATA

CTGAGTATGA AAAAATTTTA TTTCTTGTC TTTATCCCTA AACAAATACAG TATAACAACT

ACAGCATTTA CACTGTAGCG TATAGATCTT ATAATCTAGA AATGATTTCA AGTACACCAT

TATATATAAG GGAATTGAGC ATCTGTGAAG TTTGGTATT GTGGGGCATA CTGGGACCAA

TTCCCCCATG GATACAGAGG GACAACTATA TTTACTCAGT GCTTACTAAA TACCAGTTGG

CCAATGTGTT TTTCTTTTTC TGTTTTCCCTG TCTTTAGTTT GCCCCTTGCC AATTAATTCA

ATAGTGCTGC CAATGCCAGG TGTACCTTCA GAATATTCTA TTCTAATTTT GTCATCTCCA

AGCTTAAAAA TATTTAATGG GCCAGGCGCA GTGGCTCACA CTGTAAATCC CAGCATTTTG

GGAGGCCAAG GGGGGTGTA TCACTGAGG TCAGGAGTTC CAGACCAGCC TGGCCAACAT

GGCGAAACCC TGTCTCTACA AAAAAGTATA AAAGTTAACC AGTGCTGGA GCATTGCGCT

GTGGTCCCAG CTAATCAGGA GGCTGAGGCA GGAAAATCAC TTTAATCTGG GAGGTGGAGT

FIG. 6A(41)



09720552.422702

54/223

P' _____ P

TTGCAGTGAG CCAAGATCTC TCCACTGCAC TCCAGCCTGG GTGACACAGC AAGACTCTAT

CTCAAAACAA CAATAACAAC AACAAACGAAA AACATTTAAT GGCTGCACCT TGCCTGTGAA

AAATGCATTT CTGGGCCAGA TGTGGTGGCT CAAACCTGTA ATCCCAACAC TTGGGGAAGC

TAAGGCCAGG AGTTCGAGAC GAGCTGGGAT ATATAGGAAG ACACAATCTC TACAAAAAAA

AATCCACAAA ATTAGTCAGG CTTATTGTTC ATGCCTGTAG TCCCAGGTAC TCAGGAGGCT

GAGGCAGGAT TCCTCAAGCC CAGGAGTTCA AGGCTTCCGT GAGCTATGAT GGCACAACTG

CACTCCATCT TGGGTGACAG AGCAAGGTCC TATCTCTGGA GAAAAAAA AAAAGAAGGC

ATTTCTTAGG AGAGTTCTTC TCTGTAGAGT CCTAAGGGT CCATGGAAT CCTTAAAGC

ATCAGAGTAT GTGAGTGCAA TGGGAGGAAG CATTTAGCCA GAGCAGTTGT GCTCCCATTG

CATATTAATT TTTAAAAAAC AAAGCTATAA AAAAAAGTTG AAAACTACTA CGTTAGCATC

AGCCTGACAT TTAATGGCCT CGTAAATCAA ACCTAATTG ACTTTTAGC CAGTTATGCT

Q' _____ Q'

FIG. 6A(42)



09/20/02 12:00 PM

55/223

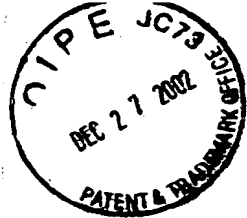
Q' _____ Q'
ACTAGCCAAC TACAGACAAC AACTTTTTTA ACCAAATTAG ACTAATAGTT GTCATCAGTG
GAAATCAAGT TTGCCATTCT TCCATGCCCT TGCTCACACC ATTACCTTTT CTGGAATGTC
CTGTACTCAT CTTCCTGTGT TGAAGTCTAT ACCCAACTTT AAAAACCTAG CTCAAAGTTC
AACACTTCCA TTCCATTTC AAGAGGCTT TCCTCTTCCT TAAAGTTTAA GAACTCATTT
TCATGAATCT TTTTGGCATT TATGCACAC ATGCTTGCTT TGTGTTATTT GTGTCAGCC
TCATATGCCC CCAAGTGTT TTAGACTCCT TAACGGCAA AATGATGCTC TAAACACCTT
TCTATCTTC ATAGTGCTT AGTCTGTTG TGTGCTATA AAGGAATACC TGAGGCTGGG
GAATTATT AAAAAGAGG TTTATTGGC TCACAGTTCT GCAGCTATAT AAGAAGCATA
GTGTCAGCAT CTGCTTCAGG TGAGGGCTTC AGGAAGTTTC CACCCATGGT AGAAGGCAA
GGGGAGCAG CATCATAT CAAGAGAGGA GAAAAAAG GAAGGAAGAA AGGAGGTGC
CATTCTCTT CAACAATCAG TTCTTGTTGG AACTAATGGG ACAAGAGGCT GGCACGGTG
R' _____ R'

FIG. 6A(43)

56/223

R' _____ R'
GCTCATGCCT GTAATCCCAG CCTTTGGGA GACCAAGGTG GGTGGATCAC CTGAAGTCAG
AAGCCTGAGA CCAGCCTGGC CAATGTGGTG AACTCCGTC TCTACTAAAA ATACAAAAT
TAGCTGGGC TGGTGGCGTG TACCTGTAGT CCCAGATACT CAGGAGGCTG AGGTAGGATA
ATCACTTGAA CCCGGAAGAC AGAGGTTGCA GTGAGCTTGT GCCACTGCAC TCCAGCCGGG
GCAACAGAGT GAGACGGTCT CAAAAAATTT TAAAAACTTT AAAAAATAA GAGCAAGAAA
GCACCAAGTT ATTCAGGAGG GATCCACCCC CAATGACTCA AATACCTCCC ACCAGGCCTC
ACTTCCAACA CTGGGGATCA ATTTCCGTAT GAGATTGGA GGAGACAAAT ATCCAAACTA
TATCACATAG TAATGAACAT AGTACCTTAT CTATAGAAAG CAATGGCTAG ACAACTGTTG
AATGGCTAAC CAAATCTGCT TTCCTATGGT CTCGCTCTAG AGGGGTCAG TATGAGTTTC
TGTCAAAAGG AGAAAAAAA ATGTATAGTC AGTTTGTGT GTGTGTGTGT TCATGTAAAA
GAGATCAAGA GAAAGAACA AGAGAAATCA TGAAAGGAG GGGGAATATA AGAATAATAC
S' _____ S'

FIG. 6A(44)



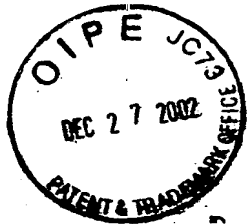
09720552.122702

57/223

S' _____ T'

ATAGAAAAA GCAAATTATC TTGTTTATCA GTAATACCCA AGGGGGTAGA AATGGTAAGT
AATAATCCTT CTTCACTTGG TCTGTAGTTC ACTTTTTTGC ACCTTTATTT TGATGAATTC
ACATCGAAGA CATTAACTCA TTAAGGCTTC CAATATTTT GGAGATAAGA AGGCTGCTA
TGCTCTTTAT AGATGGAAA CTTGGGTCAT TAATAACTCA AACAAAGACA TAACAAAGAA
ATGGAGCATA AACTGCCAGG TCCTGACTGT AGATTGGAT TCCCAGTTGG TGTCTTGTC
CCCTTTGTTA CTCTTCCTAA AGTTATGATC TTTTCTTGTG CATAGGAAAT TCATAGTGAT
TTCCCATCAC CCTTGGGATT ATCATAGCTC CTTTAAGGTC CCGTCTATGC ACTCAATAAC
ATCAACAGTA AGTGTTCTTC GAGCACTTAC TGAGTGTATA TCATTGTGTT CTCACGCAGC
ACCCACAGAT CTCACCAAGA ACCTAGCTGA AGCCTGTAGA ATGAATAGGT AAGTACTGCC
ATGCCAATCT GGAGTACTCA AGCGATGCAA ATGATTCCCTT TAAATTGTA TTTGCAGGCT
TGTCAAGTTT GCTCATGGAG AAGTGGCTAC TGCATCCATG TTATATCTAT GTAATGTTGG

FIG. 6A(45)

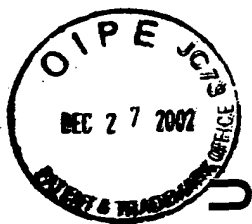


09720552.122702

58/223

T' _____ T'
ACTGCGAAGC ATCACTTGAC TTTTTC CAAG CAGAAATTAC AGCTGATGAC AAGCTGCTGC
TGAGAAAATG GATATTTTC TGAATTCAGT TCTACGTGGA AACAGCTGAC TAGTTTCCAT
TGCTGTAAGA ATGGCTCTTT TGCTCTTGGT TGATTTTGAG TAATGGCTTT ACTTCTGTAG
AAAGGAGATT TCATTTGAAG TCCACTCAGG GATTGGTTC AACAACTGG AGTACAGGTT
TCAGAAAATA TCTCTTTAAT CCTCCAATAA TAAATTTTCT CATCTATAAT TCCTGGAACA
CTTCATCCTT TGCAGCCGAG CATATAGATA GATTGTGTC TCACTGTGTT CTGATTGCCA
CTTTGACCTG CTTTTCAAC TTAGGTTACA AATAGAACAG AATCTCTCTG ATTTTCTCA
TTAATTGTTT GAATTCCCAC TTTTCCCTCAT TAGCAAGAAG TCCAGTATCT TCCTGAGAAC
TTCTTTTCT CAATCTAGGA ACTTACTGG TCCATAAGGT AACAGTCTTA TTTCTGACTA
TCAAGGAGAG AAATAACAGG AGCCATTATC ATCTTCATGG TGTCACTTTT GAAAACTGGT
CCTCTGTAGA TCTTCAGATT CTTGCGTTAG TCCATTTCAGC TGCTATAACA AAATTGCATA
U' _____ U'

FIG. 6A(46)

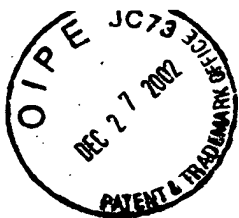


09/20/52 . 122702

59/223

U' _____
GACAGCATGG CTTATAAATA ACAGAAATGT ATTTCTGACA GTTCTGAAGG CTAGAAAGTC
AAAGATTAAAG ACACTGGCTG ATTTGGTGTC TGGCGAAGGC CCAATTGCTC ATAGATGGAC
GATGACCTTT CACTCTGTCT GCACATGGCA GAAGGGCAAG AGAGCTCTCT GGGTCTTTT
TATAAGGGCA CTAATCTCAT TTTTGAGGAC CCTGCCCCCA TGACTTAATC ACCTCCCAA
GGCACTGTCT CCCAATACCA TCACCTTGAG GGTAGGATT TCAACATATG ATTTGGGGG
GACAGAAACA CGCAGTCCAT CTCGCTTGTC CACTCCATGG TGGTATTCTT GCTGGATCAG
TTTCCTCCTT GGGGTGCATT TGTGTTCCAT GTCTAACTTG CAAGTTATAG CAGGCCCGAT
AGCAAAGTAT TCCAATGTTG GTATGCAGAG GCATTGAATA ATCAGAATGA ACCACGCCA
TAAACAACATG GTAGAGCTGC AGAGAGTACC AGCTGATTAT GAGCCCTGGG TAACAGTGGT
TTTTAGTTCC TATGTCCGTC AGCCCTTTTC TCCCATAGTA GCCCCTACTGT GTTGAAGTGG
CTGAATCGAC AGAAGCTTCC AGCTTGGGCC ACATGCTCAT GGAACCAATT CTCCTTATGA
V' _____

FIG. 6A(47)



09720552 . 122702

60/223

V' _____ V'
GCCGTACAAG AGCTGGGTTG CCATTCTGGA TACCCTCTTT TTTCAAGAGA TTTTATTCA
AGGATATTTT TTCTTTTATC AACTACAGGG ATTATTAGA ATCTTAGGGC AGTGTGCC
AACCTTTTG GCCCCAGGA CAGGTTTGT GGGAGACAGT TTTTCCATGG ACCAGTGCA
GGGGCTGG AGGCATGGTT TTGGGATGAG TCAAGTACAT TACGTTTGT GTATACTTA
TTTCTATTAT TATTATATTG TAATATATAA TGAATAATT ACACAACTCA CCATAATGA
GGAATCAGTG GGGAGCCCTA AGTTTGTTTT CCTGCACTA GACAGTCCCA TCTGGGGGA
ATGGGAGATA GTGACAGATC ATCAAGCATT AGATTCTCAT AAGAGTGCT CAGCCTAGAT
CCCCGGCATG TGCAGTTCAC AATAGATT T GCTCACCTAT GAGAATCTAA TGCCACTGCT
GATCTGACAG GAGGTGGAGC TCGGGCAGTA ATCGGAGGGT TGGGGAGCAG CTGTCAATAT
AGATGAAGCT TTGCTCGCTC GCCTGCCACT CACCTCCTGC TGTGTGGTCC ACTTCCTAAC
AGGTCACAGA CTGGTACTGG TCCATGGCCA GGGAGTTGG GACCCGTGCT TAGGGAGTAG
W' _____ W'

FIG. 6A(48)



09/20/02, 12:07:02

61/223

W'

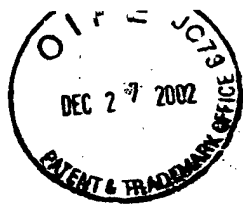
W'

GGGTGGAGTT CCCTTCACTT CTAGAAGGCC CTGGATTAGT ATCCAGAGC TGTCATTACA
GAGTATCACA AACCAGGTGG CTAAAAACAG ACATGAATTC TCTCTTATTT TTGATGGCTT
GGAAGTCCAA AGTCAAGGTG CTGCCAGGC CATGCTCCCT CTGAAATGTG TAGGGGAGAA
TCCCTCCCTC CTCTTCTAG CTCTGGTG TTTGCTGGCA ATCACTGGCA TCGCTTGGCT
TGCAGCACTT CAACATCTGC CTTTACTGTC TCATAGTGTT CTCCCCTCAT GTCCTCAGGT
CTCTCTGTCT CTCTTCTTTG TATAAGGAAA CTAGTCATAT TGGATTAAAG GCCAACCCCTA
CTCTAGTATG ACCTCATCTT AAGTCACAT GCAATGACTA TTCCAGATAA GGTACATTC
TGAAGAACTG GGAGTTAGGA CTTCATATCT TTTGAAGGAA CACAGTTCAA CCAATAACAG
CCCCTGTA CT GTTTACAAA TAGGTATTCC TCTCCTTCCC AAAGTTCTTC ATAGCAGAGA
CAACTTGTA CAAAGGCAA AATACCTTAT TATGTAACCT TAACCTAGGA TCATAGATCC
CTACTGTCTG GTGCTTTATA AGCACAGAAC CACCGGAAA TCATTATTAA GACAAGGAAA

X'

X'

FIG. 6A(49)



09/20/52 . 122702

62/223

X' _____ X'

GGCCAAAGTGC AGTGGCTCAT GCCTGTAAATC CCAGCACTTT GGGAAATTGA GCGAGTGGA

TCAACCTGAA GTCAAGAGTT TGAGACCAAA CTGACCAGCA TGACAGAACC CCATCTCTAC

TAAAAATACA AAAATTAGTT GGGCATGGTG GCATGTGCCT GTAATCCCAG CTAATCAAAA

GACTGAGGCA GAAAAATCAC TTGAACCGAG GATGCCAAGA TAGCAGTGAG CCAATATCGT

GCCACTGCAC TCCAGTCTGG ATGATAGAGC AAGATCCTGT CTCAAAAAAT TAATAAATAA

ATAAAAAGAC AAGGAAAGCC TTTTCCAAGG AGACCCTTCT GCTTTGCTAG TTCAGAGAAC

TTCTCTTTTG GAGAAAACAA ACACCCAGTC CATTAGCAGC AACGTCAGGG ATTGAATTCT

TAGGGCAGCA GGCTGGGCAC AGTGGCTCAT GCCTGTAATC CCAGTACTTT GGGAGGCTGA

GATGGGTGGA TCACTTGACA TCAGGTGTC GAGACCAGCC TGGCCAACAT GTGAAAAC

CATCTCTACA AAAAATATGA AAAAAAAAAA AAAAAAAAAA GCTGGGTGTG TTGGCTTATG

CCGTAGTCT CAGCTACCTG GGAGGCTGAA GCAGGAGAAT CACTTGAACC CGGAGTTGG

_____ Y'

FIG. 6A(50)



09720552.127702

63/223

Y'

AGGTTGCAGT GAGCTGAGAT TGCCCTACTG TACTCCAACC TGGGTGACAG AGAGAGACTC

CATCTCAAAA AAATAAAGAA TTCTTCGGGC AGCAGTCTTT CCTCCACCTC ATAGACCATG

GAGGTGAGCC AGCTCTGACA AACCATGAGA ACAATGGCAG AGACATACCT GTAACGTAAC

TGACTGGGGC AAAGACAAAAG GTGAGGAAAA TGACAAGTTT GAGAACTAT GAGACCAGGC

AGTGGGAAC ACCACTAGCA GAAATGATGG AAGTTCTCAA GAATAACAAC AGAGAAATAG

ACCATGGCCA GAGCTAGAA CCTCCAGGG AAAGGAGATG GGCTCCAGAG GCAGAAGAGG

ACGTTGAAGG GAATGGGGAG TGGGTGAAAT ATATAGACGA TGGGGACCAC CCAAGAGCAG

TCGCTATTGC AAAACTGAGG AGAAGGAGAG TCTGGAGGGG GTGGTGGGA GCTGGGTCTC

CTAAGGAGGT TTGACAAAA GCAGTCATGG AGCGGGCTTA GAAATCACAG TTGGGGACAG

GGTAAAGTTC CTCGGGATAT AGAGGATGAG ATTAGAAGAG GTTCCAACTA GGTAGTGTG

GAGAAAAGCA CTATTGACCC AAAAAGGAAG GAGAATGTGG GTGGAAGTGG CAGAGAAAGA

Z'

FIG. 6A(51)



09/20/52 . 12/27/02

64/223

Z'

Z'

GGGGTTTGAG CAGAGAGTGG TGATTTTCT AATGCAGAGT TGTGGGAGGT GGAGTGCAGG
GAGCCAGGCT GGGTGGCTGT GCTGATGTGA TTAAGCACTT ACTGACTGCC AGGCAATGGG
CTAAGTACCT GAGATGCTTT GTCTGTTATC CCTCCCCGAA CCCCTCTGAG CAGGTGCAGT
TATTATTCTC ACTTCACAGA TAAGGAAATT GAGGCACAGA GAATTGAGTA ACTTACCCAA
GGTGACATAG CTCATATATG GTAAAGCAGG CTTTGAACTC AGTCTAGCTC CCGAACCTAA
GCTTGTAACCT ACTATGCTTT TCCCAAAAAA AGGGGGCTGG CACAAAAAGA CCTGAGGGGG
CTGGGCATGG TGGCTCATGC CTGTAATCCC AGCACTTCGG GAGACTGAGG CAGGTGTTTC
ACCAGAGTTC AGGAGTTTGA GACCAGCCTG GTCAACATGG TGAAGCCCTG TCCTACTAA
AAATACAAAA ATTAGCTGGG TGTGGTGGTG TGCACCTGTA GTCCCAGCTA CTTTGGGAGG
CTGAGGCAGG AGAATCGCTT GAACCCAGAG GCGGATGTT GTAGTGAGCC AAGATCATGC
CACTGGACTC CAGCCTGGGT GACAGAGTGA GACTCCATCC AAAAAAAGA AGAGCTGAGG

AA

AA

FIG. 6A(52)



09/05/2002 14:00:02

65/223

AA

AA

TGATGGCCAC CATCAGCATC AGCCTGGAAG TTATAGCAGG ATGCTAAGTT TCTCTAAAGC
TGTCTTTCTT AGGACTTGAA AAAGATAACT TGGGTTTGTA TCCCATCTCT GCCATTAGTA
GTTTACTGGC TTTGGATAAA TTTACTTAGCC TTAGTGAACC AACTTTGGAT TTTTATAGAG
ATACTGTAAT GAAAGGAATA AGGTATCAGT CTTAGCAGAG CATCCAGAGT GTTCCCTATTA
AAACCTAAAT CATATCCTGT CATTGCTGTG CCCCAAACCA TTCAATGGCT TCCCAACTCA
AAGTTAAAAA CTCATCTTTC CAGTGGCCCTG CAAGAGCCCTA TGCTATCCGG TGTCTGACCT
CATCTGTTGT TCCTTTCTCC CTCCCCTTTCT TGGCTCCAGA CGCACTCTGG TCTCCTTGCT
GTTCCCTTGAA TACACCAGGC ACACTCTCTT CGCCTGAAAC ACTTTACCCC AGATATCTTA
GCTTACTCTC TGCCTCCCTC AATTCATTGA TGAAATGTCT CAGTGAAGTC TTCTCTCTCT
CCTCTGTAAA AGTATACTCT CTGTTCCCCT TCTTTACTGT TCTAGCTACT ATTGCTGTGT
AACAAATCAC TCCCCAAATT TAATGAGTGA AAACATCAGC CATCATCTTA TTCTCACGG

BB

BB

FIG. 6A(53)



09720552 122702

66/223

BB

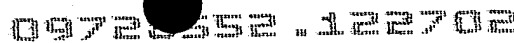
BB

TTTCTGAGGG TCAGGAATTC TGGAAGGGCT CAGCTGGGAG GTTCTGGCTC TATAATCTCT
TATGCAGTGA GAGTCAGATG CTGGCTAAAA CTGAAACAAA GCAGGGTTCT AGTAGCTGAG
GGCTGGCTGG GTCTCTCAGA TATAGTTCAG ATCTCCTCCA GGGGTCTCTT CCACGTGGGC
TAGTCTGAAC TTCTTCACAG CATGGTGCC TCAGGCGAGT GGACTCTGCA TAGTGGCTGA
AGGCTTCGCA GCTGAGTATT CCAGCAAGCA AAGTGGGAGC TGTATTGCCT CATATGACCC
AACCTTGGA TCCACACAGC ATCACTTCCG TGTATTCTAC GGGTTGAAAA GTCACAAAAA
CCAACCAGTT TCAAGGAGAA GGAACAGAGA TCACATTCTT CAATTGGAGA AGGTCAAAG
TCACATTGTA ATCAGAGCCT ATGGGATACG AAGTATTGCG GTCAGGTATG AAAAATTGTA
TTTGCTGCAT CTGCTTTACT TTCTCCACAG CGTTCATGAT CTGCTTCTCA CATGATATTG
ACTTACGTCA TTTCTGCGTT TCCTGTCTTC CACACTAAAA TGTACGCCCTG TTTTGTTCAC
TGCTGTATCC CCAGAGCCTA GCACGGAGCC CAGCATGTAG TGGTATCCAA TAAATACTTG

CC

CC

FIG. 6A(54)



67/223

88

TTTGCAATGAAT GAATTCTGTC TTTTAATCCT AGCTATAGGT TTCTAAGTTA AATATTACTA

TAATCATCTT ACAGACGAGG GAAATGAGGC TCAAGAAGAT TTGGTAACTT ATCGGGATC

ACTCAGCCAC ATAATGGAAG AGACAGCAT^T GAAGTACACA TGCTTGCTCT GTCTGCTCTT

CCAAGCTGCT CATCACACAG CTGCACCTCT GAGGACTTCC CTCCCAGTC CACTCCACC

CTTACCCAGA GACACACATG GCCACAATCC ACTAGCAGAC CAAATTCAA TTTTTCCTCCCA

GTTGGTTGCA CTCAGCTGA GAGCAAGCA ATTGCACTTT AAATCCCCCTT ACAGCAGATA

TTTTCAGAGCA TGTTCGGAAG AACCATCAC ACTTGGCTTT TAGATCTTAT TTCTGGTTTG

TTTACAAAAC ACAATTAAAT GAAAGGTTAG GTAGCTTTTG AATGGCCAGC TCAAAGTTTT

GGGCTTATTTT TGCCTTGCTG TCTTTATAGG CATTTTACCA ATATTATCA CTATTTCCCT

TTAGGGAACCC TTAGATCTGT GATATTTGAA ATATAAAGC CTCCTCATTG GCCCTTTAAA

AGGTTTGTGG TAAACCACA CCATTACAT TCACAGTTCC TTATTTATGA GGCCTGATTG

DD

FIG. 6A(55)



09720552, 122702

68/223

DD

DD

CACTTATTTC CATATTCTC ACTGTTTCTC CGATGAGGAT TTCACATAAT AGTGTTTGAA
GGCTAAAGAC TTCAAAGCAG ATTCTTTACT ATTTTATCTC TGAAAAATAT TCAATATTG
TGTAATTAAA GTGAAGTCTT CCTAGAGAAA ATGACAACTC AAATAATCTT AAATGTACCT
CCAAGAAAAA AGCTGTCAAA GTGACATTTA GTAATAGAGT CACATTCTCT AAGGCCTTGG
CTTCTCCTTC TGATTCTTAT CATCTTTGAA GGTATGTCA TGGGCTGACT TCAAATCAAC
TTTTTAAATT ATTATGGCCT TCTTTAAATG TGAGTCTGA AGTGAGGGG CTTTATCTTT
CTTTTGCTCC AGATTTTTT TACCGCGTCA TTACCAAGCA TCTTAAACA AACCTAAAA
ACAAAAATCT TCCTTGACCT GGTTTTCCC ACTAGCTAAC ATCCATTTT TATCTTTCCC
CTTTGCACTA AAGGTTTTTA AACGGATCTT TATACCCCTCT GTCTCCATTT TCTCATCTGC
TAACTTATAT GGCAAAGATT ACCACTGCCT TTCAACATAA TTGGCCAATC TACAGAAAGT
TTTCAAGTTC TCTTTTAAAT TGACCACCTC CTGCCTACCT CCCCACCTTT GACATCTTGC

EE

EE

FIG. 6A(56)



0972052.122706

69/223

EE

TTCTCACTTG GCACCTTACC CAGTGTTCAA GATTCCTCTCC TTAGGATGT CTTCAGAGCA
GCTACACAGT TGGTACTATA ATTTATACAT CCTTGTTACAC AGGGCTTGCT GGGATATTGA
TGGAGAGAAG GAGGAAACTG GAAGTAGTTC AGGCCAGAGC TAGGGAATTT GACCCATCTC
CAGGTCTCAG GTCTGCAAGG GGAGCTCACA GCTTAACACA TGGAGTCTAG AAACCTGTGC
TGGACCTTGA CCAACACCAG CCCATGGAGT CCAATACAGT GCTCAATAGG GATTTCCAGG
AAATTGCTAT ATTTATTCAA AGAGAACTTA CCAAGTGTC GCTACGTGTT GGGCATTTGTG
CTAGGCACAG GGACCACAAA GATAAGACAT TGTAGCTTTC CTTAAGTTGC TCACTGAGTA
AATAGAGAGA CAGAAAGGTA AACAGGTAAG TGCAAAAATA CATACAATTC AGCAATAGTG
TTCATAGTGG CTATGGAGAG AACGCTCACT AACTTTGTTT AACAGTTGT TCTTTCAAGG
ATTTGACATG GATTGATTG GAAAAGCATG ATACCATTTT TTGCAATTAA ACACAGGAAT
ACATAAATAA AATGCATCAG TATTTTTTAC AAATAGCTAC TAAGAGCTAC TAGAAACCT

FF

FIG. 6A(57)



09/20/02 12:27:02

70/223

FF

GGGAATTCTT AAAACCTTAC CATGCTACTT GCTCTAAAAT ATTTTATTTT ATGTTATTTT
GTACATTCTT TTACCTACAC AAACACCACT GTTTTCTTCA TTTCTTAGTC TATTAAACC
TCACACCCTT TCAGCATCTC TTAATTATTT ACTACCATCT GTTAGTTCTC CTGTCCTGAA
TGAAACAAA ATGGCAGAAT GTAAAACGAG GCGAACAGA TTTTGACAG GAAGTATCA
GAGGTAGAAG GAAATAGTCA AGACACATAT GATAACGAA AACAATAATA ACTTTATACA
TAACAACCTA TAGACACATT TAAAAGTTT AAGATCTCA GAGCTATGTC TGAATAGATA
GGAGTAAAA CTCTATTAG TAATTAGGAA AATAACAAGA ACAGTGAAT TCTTAATGAA
TGGCATGTAA TCAAAACTGT ACTTATCGTC TAATTCTATA TCTTGAAATGT TTTTATTTA
TTTATTTATT TTTTATTTT TTGAGACAGA GTCTTGCTCT GTCACCCAGG CTAGAGTACA
GTGGCGTGAT CTCAGCTCAC TGCAACCTCC ACCTCCCAGG TTCAAGCGAT TCTGCTGCCT
CAGCCTCCTG AGTAGCTGG ATTACAGAGG CCTGCCACTG CACCCGGCTA ATTTCTGTAT

GG

FIG. 6A(58)

GG



0972052 122702

71/223

GG

GG

TTTTAGTAGA GATGGGGTTT CACCATCTTG GCCAGGCTGG TCTTGAACTC CTGACCTCAT
GATCCACCAG CTTTGGCCTC CCAAAGTGCT GGGATTACAG GCGTGAGCCA CCACGCCTGG
TCGAATGTCT TTATTATTG AAGAGACAAC ATGGGCCCTTA AATCTGTCTT CTATTGACA
GACTTTGATG GAGTCAAATC CCAATGCTGC CACTTACTGA ACGGCCTTAA ATGACTTAGT
CTCTCTCAGC TGTCTTTCTG CATATGTAAG GTGGAATAAT GATGGCTTTC AAGGAGGAAT
AAACCTATGA AAAGTGTTGA GGATAGTGTT TGATATGAAA TAAGGATTTC AACAAGTAGT
AGCTGCTATT GAAGATTAA GAGTTATTTA TTACAACATAT TTAATAAAAT TTAAAAA
AATACACTTA AATTATTAAA GAGCTTTGAA ATGGGCCAGG CGCAGTAGCT CCTGCCCTGTA
ATCCCAACAC TTTGGGAGGC CAAGTGGGC GGATCACCTG AGGTCAGGAG TTTAAGACCA
GCCGTGCCAA CATGTTGAAA CCCGTGCTCT ACTAAAAACG CAAAAATTAG CCAGGTGTGG
TGGCATGCAC CTGTAGTCCC AACTACTCAG GAGGTTGAGG GAGGAGAATT GCTTGAACCT

HH

HH

FIG. 6A(59)



09720552 122702

72/223

HH

HH

AGGAGGTGGA GGTTGCAGTA ACCCGAGATG TCACTGCACT CCAGCCTGGC AACAGAGCAA
GACTCCATAA AGACAACAAA AGCTTTGAAA TTGTGTAAAT GAGTTGTACC TATCTTCATT
TAAGAAATTC ATCTTTGTTC ATTTATTTTT ACTTGACATG AGAGCTTCCA GCAATTTTAA
ATTAAGCCCT CACAGATTTT ATGTCACCTGG CTATGTGATA AACAAATTAT TTGCTAAAAT
AATATCTTG CTTCCTTTTT AAGGAATTGT CTCCCTAGAA ACGGTTTGTG CCAAACAATA
CACTGACTTT ACACAAAATC AGATCTGATT GGCAACAGTT GCAGATGTTT TCAAAAGATT
TTCATTTGAG AAGGGGCCCA TTTGGGTAT TTAGATTCTA AGAACTGAAA CTGCTTTGTT
CTGTTTTCT GGCTTCTGGG AGAGGAGGAG ACATGAATC AGTTAGCACC TTGGTATTTT
CTTTATCCTT CATTTCATA CAGAAGATGC TTCATATGCA CAGTGGTGTG AGGTCACATC
AAAAGAAAG GAAACAGTTT CTGTTGTTTT AATTTTCAAC CGGAAAGGAA AGGCACCCAT
TTTGTTCCGC TCTAATTAGC CAGTGCATGA CTTAGAGAGC AGGCAGATGC TTGAAGGCG

II

II

FIG. 6A(60)

II
TGGTAACACA GGTCTTCATT AATCTCCACG CAGGACTTGC ACTTCTACTA TGCCTAGGCT
GAAGAAAATG GCTCAGGAAG ATGAACAATC TCACAGAGCC CTAACATACT GAAGCCAGGT
GTTATAAAGC ACAAGTCAAG AGGGTGAGAA ACTAACGTTT TTGAAATCTC CCACTTCTTT
CTACGTCAGA AGAGCCAAGC TGATTATTTT AGTTGGAATT TAGAAATTTT TAAAAATTAT
TCTAAAGTCA TGAACAAGCC TAATTATAAA GATAGTTGCT GTGAAGGTGC TGAAATAACT
CGATTTTACC AACCCCTCTT TCTGGAGGAA GCCATAATGG AATCCTGTAC AATGTTCACT
CTACCAACGA ACTCTTGTTT TTCTAATGAG GAAACAGAGG CCCACAGTAT TAACTATCT
TAACCAATAC AAAATGACTA GTGCTCTGGT CCTTTTATTA AGCACTAAAA TTTTGATCCA
ATAATAAATC TGTCCATTAG AAGGAGTTTC CCTAATGTAC TGGTCTAAC TTGTTCCCTT
CAAGGGCCA GTGTCCCGTA CACATAGCTA AATGGGACTT CTCTTCAACT ACCATTACCC
AGAGGGCAGA ACCTAAAATG CTGTGAATGA CATTCTGCTG TTCACATCTC AGCAGCA
JJ

FIG. 6A(61)



09/20/52 122702

74/223

JJ

JJ

GTGTTGCATT TGAGCTTCTG CAGGGCCACC CAGGACCTAT ATCTGCTCAG ATGTTTAACT
CATCTAATTC AGTGAACACT TCATTCTAGT TAACTGAACA TCTACTTTGT ACAAGGCACT
ACAGCGGTTC AGAGATGAAT AAAATCATGA GATTCCACTG TCTCCTATAA ACCATCACTT
TGGGAAATTT TAGAAATGTG GGTAAAGCTCC AGGGCTTCCT GCAGCGTAGA AGTCACAAAC
TCAAATGCCT GCAGAGGCCC AGCTGACAAC ATAAGTAAAT GATTCTGGCT GGGCGGAAAA
CAATTACGGG TGGGTGGGTT TCCAGCTGGG GAGTGCACGC CTGTGTTAAA GGACAGCTGC
TACTCATTTC CAGCCAACTG TGTTCCTCATG TAGAACTGCG GCCCAGTGTA GCCAGTACCG
AAGATTTC TC AGAAAAAGCC GGAGATCTCA ATGTTAGTGT AAAATCTCTC AAATTTCCTAA
GAGGATTATA TGGGGCAAAG GTTCTCAGAT CAGTTTGCAG TCTCTTACTT AGCCCATGTG
CAGAGCAGTC GTAGAGGGTA GCATGCAGTG TCCTACATAA TAAATCTTTT TTATTTTATT
TTATGCCTTC CTCCTTCCTG TCTCTCTTTA ACCTTTCTTC TTCCCTCAGG CTGGCTTCTT

KK

KK

FIG. 6A(62)



09/2005 122702

75/223

KK

CCCTCAGCCT CGTCCGACCC CAGCCTGGGT TCAATGAACA TTCGGTAAAG GAACACGGAA
TGTC AAGCGC ATTAGAGACA ACCTTGAGAC ACATTCCTCT TCGCGTAAGC ACTTCAC TGT
AGATTTTAA TTTTAAACAA GACAATGTTT ACGACTTGCT TCTTTCAGGG AAGAGCGATA
TCAATTTTAG TGAACACTTC AAGGCTGAGA TACGCTAGGA GAGTCGTGTG GTGTTGCACA
GCAAAGAATT CCACTTTGAA GCGAGTGGA AAAAAGCAT CAAATGCCAC ATGTA ACTCA
CCGCC TGAAG GGTACATTG GTATGAAACC TGGGTTTAAA AAGGACCGA ATAGACTAGC
CAT TAAAGA CCTGCGTACA ACCTCTCTCT CTCTCTTTGA GAGATAATGT ATCTGGACAA
TAAACATGAA CAGAGTGGAG TCTATCCTGT TTAAAACATT GCCTACTGTA CAGGCACCAG
GAGCTGAAGG GTCAGAAATAT TAGCAGTGGG AGCTTGATTA GAGTTGATGA GAGATGGGTA
GTAGGAGGAA AGAGTGAGAT AGAGGAAGAG GACATGGGG TTACCCATAA GTGGAGAGTA
GAAAAGTAGA ATCAGCTGGC CATCAAAGG CGTGGGACTG AGGAACAGTA TGGCATGTAT

LL

FIG. 6A(63)



09720552 122702

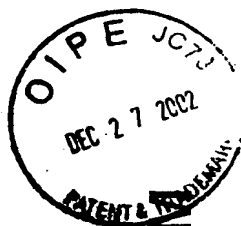
76/223

LL LL

TAAATATACT AAGCGCTGAC ATTGGAGGAG AACTAGGAAG TTAAATGAAA TCAATAGGGG
ATGATGGAGA ATAGTTAGGT GTGCAGGGAT TAGGGTTATG ATAGAAATAC ATGTGAATAC
ATGCAGTATT GTCTGGAAA ATGGTTAACA GTTGGTTCTC CTGGGGGGTG AGGGGAAGCC
CTGATTTGTA ATATTGCCT ATTCTGTGG TGCAAATACT CCCACCATGA CCAGTTTCAA
GCTATGAATG TTGAAGTCAC AGAAGCAGG TTGGGAGGAG ATGCGCACAT TTGTTCCCCG
GCAAGGTGA AGTAAGGAA GGTGAAATCA ACAAGGTCAA AGAAAACTCA AGATTTCGAG
GTGCCCTCAGG TCTGAGGGC AATGAAGTCT AGGAATGGCT GTGCTGAGGT AGCTGAAAATA
GAAGTGACTG CAGAGGTCAT GAAGCTGAAG AGGTGAAAAC AGAAATTAGA AAGGCAAACC
CCCACCGCCC AACCCCCACC CCTGCAGCCA GTTCTGAGG GTGACAATAG AGGAAAGGGT
GGAGATGGAG TTCAGGTCCA GAAGCCATAG AAGCGAGTGT GACATTGTGC TCAAGGTCAG
CACATGTCAG TGTGGGGTGT CACATGCTGT TGTGAACCAT CATTATCAC CAATTATGGA

MM MM

FIG. 6A(64)



09720052 122702

77/223

MM

MM

AGACCTCCTA TGGGCATCTT GCCATATGCA TTATAAAGAT GTGTAAGAAG ACATTTCCCT
CCTTGGTG AGGAGAATTA GGGCTGTACA CAGATACTGT AGAGTGCCAT GTGCCCTGGTA
CAGATAAGGT GTGTTAGAGG TTAAAAGATG AGGCTCTTAA TATTAATGAT AGATCCCAC
TACCTGAGTC TGAATTACAA TGTGCCCTAGC ATTAAGTGTT TTACCTGCAT TCCCTTTGAC
GTTCAGAACA ACCCATTTTA CAGATAGGA AATTGGGTCA GAAAGTTTCA GTAACCTATC
CAAGGTCAAC ACAATTGGCA AGTGCCAGAG CTGAGCCAGG AACTGAGGTC CTCTAACAC
CAAACAGCTT GTCTCCCCAA TCACTGTGCT ATTTTCCCTCC CCCAGAAGAT AATACTCTGA
TGGAAATGAA GGATAGTGTA ATAGGAGATT CGGTGTTCCCT TTTTITAAAA AAAATTCAGC
TTGCATATTC CTAAAGAGTC AATTCATGTT TAAAAAAAAT TTCCCTTGTG CTGCAATGTG
ACATGTATTT TTAGGATCTG CTGTTAGCAA GTGTATTTTT GTGTGATTGA GTGGGAGAGT
GGGAAAAGTT TTGCAGAGCT GTTGAAGCCA GAATGCAGGG GGGCTGCCA GCAGAGACTG

NN

NN

FIG. 6A(65)



09720552 11111102

78/223

NN

NN

TAAATCTCT GCCATCTCAG GTCTTGGAAC AAGCACAAAG AGATGTGTTC TCGATTTATT
ATTCTATGTA CATCCCCAGA TGAATGACTA GTTAAAGGTA TTGTTAAAGC ATTTTAAATG
ACCCACTTCC AGCAGCGAAC AAAATCACTT GCTGTGCCAA GCCAACTGGC ATTTCTGAGA
TGATAAAACC ACAAGTGAG GAAACGTTA AACTGCTAA AGCAAAATG ATACACAATA
ATGGAGAAGG AGAAAAATTG AGCTTTATTG TCTGCCTAGG CAGATGGCTG ACCACTAGGT
GGGCTCGGC GTCACGTCCA GGGTAATTGG TTGCTGGGGT GTTTCTGGCG AGGAAGATTC
ACGCTTCAGC TCGGTCCACA AGATCCCTGC TCATTCTTTC CTAGATTCCA TTTTCTGCCT
CCTCTCCATG ACTGGGTCTG ATGGTTGATC CAAACGGCA ATTGAAATCA GAAGGTACC
TTTACCTTAA AATGCTTTTC TGGAAATAAA AGGACATGAA AAGTAACTAA GGACCGGATT
TCCTAGCCGT CTTTCTCTCC TGCATGCGCA ATTTATCCCC AGATATAAAA TTGCCTGCTT
TGATAATTAT ACCCTCTAAA TGAGGGGCAA GTGGCTAATT ATGCCACAT GTGGCCGATT

00

00

FIG. 6A(66)



0972655E . 122702

79/223

00

GCACTCCCCA TTAGCCAATT ATGTGCTCAA TTATTGTGTC ACATGAATAA TTGCACTCAT
GGAAAATAGC GCCCTCCTTT CAAATCCTCG TGCTTGGAGT GGCTGATGGA GTAATTGTCA
CACTGGAAAT GCACTTGGTG GGGAGGGAAA GAGTATCAGA TACCAGGAAA CGCATAAGTG
ACCAGAGCTC GCAGATGTTT ACTGCCACAA ATGGCCTTAG GAGCCAGAGA GAGCGGAAG
GACCACAGGA TGGAACGGGC CAGCCTGTGA GTTAGGAAGC CTGCTTCTGA AGTTGCCCTGG
GCAGCTCATG TGCGGTGACC TTGGGCAAGT CATTAACTTT CCTTCAGGTC TAACTGGTTC
TGCATACACA ATGAGGATGG TAATAACGCC CAATTCCCAT CACTATCGTG GGATGGATCA
GACTATTAA AAGGATTTAC AATCTGCTTG GGTAAAAGCT TTACATAAAT ATGAGGCATT
ATCATGTCGC TTGTTACATC TCCAATTATG AAGGAAGGT AATGACCCTC CACAGCAATG
CAGGACTCCT GGTTTGGAGG GAGGAAAAGT TTGAGAAGGA CAGGAAGCTT GTTGCCCCAG
CACTGATGTT TCTACTGAGG TACCAGAAAA TGTCATGTGG TCATACAGAA TTCAATTATT

PP

FIG. 6A(67)



09720552 . 422702

80/223

PP

PP

CATTCAACAA ACATCTGTCA ATTGTTACAC TGTCCCTGAGA ATTTGGAAAA ATGATGAAAG
ACTCAGTCCT GCCTTAGGAG GTCACCTGGCA CATGGCCCG GGGCCCTGTT TTGGGCCCTTT
TACTCTGACC TGTGCTGATT TGCAAAATAGT GGGAAATTTT ATCTCAAGTC TATGAAATCT
GGCATGCATT TTCACGGTTT GATTGCCAGG TACATTGAT GGCAATGAGT CTTATAATGT
TTGGTTACCT TCATTACCT AAGAACTGTG GTTGTGCTG TGGTTGTTGT TTTTGTGTT
TTTGAGACGG AGTCTTGCTC TGTCAATCCAG GCTGGAGTGC AGTGGCATGA TCTCCGGTCA
CTGCAAACTC CACCTCCCAG GTTCAAGCGA TTCTCATGCC TCAGCCCCCT CAGTAGCTGG
ATTACAGCG CGCACCACTA TGCCCGGCTA ATTTTGTAT TTTTGTGTCG GGACACAGAT
TTCACATGTT GGCAGGCTG GTCTCGAACT CCTGATCTCT GGTGATCCGC CTGCCCTCGGC
CTCCCAAAGT GCTGTGATTA CAGGCGTGAG CCACTGTGCC CAGCCAGAAC TGTGGTTTAA
ATGACAATGC TAAAAAGTGG TATATGTCAC AGTGTCGGGT GGGGCTAAGA GGCACATTGC

QQ

QQ

FIG. 6A(68)



00720552 . 4R2V0R

81/223

QQ

QQ

TGCAGTGATC CATCATTCAT TTCCCACCAT TCTCGCCTGG ATTAGCGCAG CAGCTCCCAG
AGAGGCACCT CACTTTGACC TTCTTCCTCA AAGACATTCT CTGTGACCCTG CCTGGCCCCCTT
ATTACCTCTC TAGCTTTGCC ACTTCCCTAT GTCTCCATCT CCCCTCTCAC ACGTAGTAGA
AAGAGACTCT ACCTCATGGA GTAAGGAGAG GCTTCACAGA GGCAGGATTG CTATTAGTCT
TCAAAGATGA GGATTTTGCT AAATGAATGA GACAAAGGGA TTGGGGCCAC ATTACAGGGA
AATTGAGGTA TGTAATAGCC TGGTGCAGGT TAAGAGTGTG GACTCTGAAA CCAGACTCAG
CCTGGAATTG AATCCTGGCT GTGTGATGTT GGGCCAGTGA CTTAACCTCT CTGTGCTTTT
ATTCACCTCT CTATAAAATG GGGATTATAA TAAACCTACC TTATAAGGTT ATTATAACAG
TCAGTAAATA TAAAAATAGA AGTTTTTGA TGATGACTAT CACATCAGTA AACACTTGTT
TGCCATTATT TTTATTACTT GACTAAAAAT ATACCAAAA GACCATCCA GAAAACCCCT
TAAGCTGCTA GTGCAGAAAG ATTCCCCCTG TGTTTGTGTG CTGGGGGTC AGTGGTGCCT

RR

RR

FIG. 6A(69)



09700550 . 422702

82/223

RR

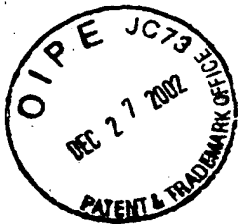
RR

GTGGCCCACT GGAGAGGAGA CAGCTATGGC TGGAGTGATT CTCAAACCTC AGAATGTCTA
AAATCATCAC ATGACAACCT TATTAAGGAA AGCAAATGCC TGGGCTCCAT CCTCAGAGAG
TCTCATTAC TGGGTCAGGA TAGAGCCCAG GAATCTTTAC CTAAAGAAC CATCCACCT
CCCACCTCAT ATGATCCCTTA TGCAGGTGAT CTGGGGCCCA CACTTTGAGA AATAGACTCA
GGTCAAAGTG GCTCTAACTG CATCTCATT CTACCTGGC ATATCTAATA GTAGAGAAGA
AGACAAATGCT AAGATTTTGG TTGGAGATCT TTTGCTGGGA TTGCTGCTTC ATTCATTAC
TCATTTATTT ATTTATTTAT TTATTTTGAA ACAGAGTCTC ACTTTGTCAC CCAGGCTGGA
GGCAGTGGC ACAATCTGAG CTCACTGCAG CCTCAGGCTC CTGGGTCAA TCGATTCTCT
TGCCTCAGCC TCCCGAGTAG CTGGGATTAC AGTCATGCAC CACCACGCC AACTAATTCT
TGTATTTTGA GTAGTGACAG CGTTTACCA TGTAGCTAG ACTGGTCTCG AACTCCTGAC
ATCAGGTAAT CTGCCTGCCT CGGCTCTCTCA AAATTAGTAG CTGCAATTAC ACGTGTGAC

SS

SS

FIG. 6A(70)



09728552 . 122702

83/223

SS

SS

TGCCGTGCCT GGCCGTGCTGT TTCTTTTAGT TGGGCCCTCTT CTGTAATAGA GTGTGAGAAAT
TCTGACTTGC TGCAACAGTC TGCTTTGAAG CAGGGCTGTG TTTACACTGG TCAGATGTGG
AATTGTGGG CACACTTAGC AGCTTCCCTT TCTAATTTT CTGTATTTT AGGAGAACAA
TTTTTAAAAA TTTAATAAAA ATGCCCTTAA AATTAACATT ATTATAAGAT GAATCCCAT
TTTCTAATCT TGTAATAATA AACAAATCAT AAGCATATGA GCACCTGCAC TTAGGGAATC
AAGTTGGCA AAGCTAAACA CTCCAGCTC TAGGTGATTC GCGGCAATAC AAATGGAGCT
GGACTTTGGC CACAGTGCAA AAATATTGAT CTGTTGTTAG ATGCTCTGAA GTTTCAGAA
AGAAATTGGT CTGCCCTGCTG TGCTTCAGTG CTTAAGGGA GTGGTTCCTC AAAATGTTAG
TTTTTAAGCC CAGCTTTCTT AAATAGGAAG ATTCTAATAG TAGCAAAAAT ATAAACTGCT
TCTAGGTTA AAAAGGACCC AGCACACAAT GGTATACACA CACCTTTCTC CTCAGGTGAT
GAGTGGATGA GTGGCCCTGGT GTATTTCATA ACATCTCCCA GTCCCAAATG CTAAAGCAAT

TT

TT

FIG. 6A(71)



00725552 . J2N702

84/223

TT

TT

TGCTGAAAAG ATACCATGTG TACCGGAACC TTGCAGAGGT ATTTTGTGG CATAAAAAGA
AATATTGATC ATCTATAGTA AAAATGGTTC TACTTTAATA CTA CTGAGAA AAGATTTTCT
TTTCCCAGAT CTACATCCTG AATCTTCATG AAGACAAGAT CCCCTAAACT TCCACTAACA
CCATAATGTG TGCTGTCCCTT TGTAATGTAG TCCACAGATC TCATAAACTG TCAGAAATAG
CAGAGATTGT AAGTCAATC ACTTCCCCCTG TAAGGCCCTG GTCCCTCACT TACATCCCTA
ATAACGTCCT CTAACCTCTG CTGGAGGGCA GATTAGCTG CCAGCTGGGA AGAGCTCTGC
CCTAGTCAAC ATTTTATCT GTGGCTTTCA GATGAGAACA CTGGATGCTT ATCTGAAAAA
AGCTCCCTCAG GCTGGAGGA GGGATTGGCT CTAACAAGAT GCAATGTGAT AAGAATAAAA
GCGAAGCCAA ACTCTAGGC CAAAGGCTCT AGCAACACAC TTTTGAGAAC CTGGGAGACG
AGTTTGGCT GATGCGAGCT TCTCCGCCCTG CTAAAGTAGC CCATTCCATT TGGACGGCTC
TAGAGGCTGG CATGTTCTC TCCACGTTGT GTTAATGTAC TCCAGTTTCT TCCTGCCATG

UU

UU

FIG. 6A(72)



007 115552 122702

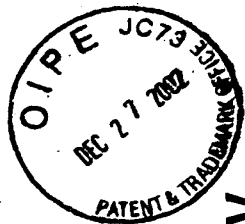
85/223

UU

AACTGGCATG CCTGGCTCC TCCTACCTTC CCCACTTTAA GTCTTCCCTC CCTCCTTCTG
ACCTTCCCAT TCCAGCCACA CTGGCCCTTTT GTCTGGTCCT AACAAACCAT GCCTTTCCCTG
CCTCCAAGCC CTACACCTGC TATCCATCCC TCTGTCTGAG AGACACTCCC ACCCCTTCAC
AAAGCCTGTT TCTCATCCTT CCAGTTCAGA TGTCTTCTCA GCTTGCCCTCA ACTGACCTCT
TTCAGCTATT CTCACCTCTT GTA CTCTGTT CATTTCCCTC CTGGCAGTCA CCATAATTTA
TCTTTATTG AATCAATTTC TTAGTGTAT TATTAGTTA TTTGCACACT CTGTCTCTCT
GTGCCCTTCT TATTCACCTGC AGGCTTTCTT ATGTAAGTAA TTTATTACT TAAATTTTAA
AAAAATAATT CAACTTTTGG CCGGGCACAG TGGCTCACGC CTGTAATCCC AGCACTTTGG
GAGGCCGAGG TGGGTAGATC AGCTGAGGTC AGGAGTTCGA GACCAGCCTG GCCAACATGG
TGAAATCCCA TCTCTATTTA AAATACAAA ACTAGCCGGG CGTGGTGGTA TGCACCTGTA
ATCCCAGCTA CTCGGGAGGT TGAGGGAGGA GAATCACTG AACCGGGGAG GTGGAGGTTG

W

FIG. 6A(73)



00720552 . 442702

86/223

WW

WW

CAGTGAGCTG AGATCACGCC ATTGCACTCC AGCCTGGGC ACGAGAGTGA GACTTCATCT
CAAAAAACA AAAACAAAA AACCCCTGCT TTTACAGAGG GCTGAACATA TTTACATCTT
CACCAATAGT GTATAAGCAT TCCCCCTTCT CTACAGCCTC ACTAGCATTT ACTTTTTTAA
AAAACTTTT AATAATAGCC ATTCTGACTG GTATGAGATG GTATCTCCTT GTGGTTTTCA
CTTGCAATTC TCTGATGATT AGTGATATTG AGCATTTGTT TATGTTTGTG GGCTGTTCTG
ATGTCTTCTT TTGAGAAGTG TCTTTTCATA TATCTGCCC ATTTTTTGAA TGGAGTTGTT
TTGTGCTTGT TGAATTAAAGT TCCTTATAGA TTCTAGATAT TAGACTTTTG TTGGATGCAT
AGTTGTGAA TATTTTCTCC CATCCATAG TTCTGTTTAC TCTGTTGATA GTTCTGTTT
TGTTATGTTT TGTTTTTTTG CTGTACAGAA GCTGTTTAAAT CTAATTGGTC CCACCTGTCA
ATTTTGTGTT TTGTTGCAAT GCGTTTTGAA TTTTAAATAA AAATCTTTC CTAAGGCTGA
TGCCCGAAC AGCATTTTCT AGGTTTTCTT CTAGGATTCT TATAGTTCAA AGTCTTATAT

WW

WW

FIG. 6A(74)



09728552 122702

87/223

WW

TTAAGCTTTT AATCCACCTC AAGTTAATT TTATATATAG TGAAATGCAG GGGTCCTGTT
TCATTCTTTT GCATGTGGCC AGCCAGCAAT CCCAGAACCA TTTATTGAAT AAGGAATCTT
TTCCTCATTG CTTATTTTGT CAACTTTGTC AAAGATCGGA TGACTGTAGG AGTGTGGCTT
TTTCTGGGTT ATCTACTCTG TTACATTGGT CTATGTGTCT GTTTTGTAT CAGTATCATG
CTGTTTTTGT TACTATGGTC TCATAACATA GTTTAAAGTT GGATAATGTT ATGCCCTCTGC
TTTGCTGTTT TTGCTTAAGA TTGCTTTGGC TATTGAGGCT CTTTTTTCAC TTCATATGAA
TTTTAGAATA GTTTTTTCTA ATTCTTTGAA AAATGACCCTT GGCAGTTTGA TAGGAATAGC
ATTGAATCTA TAGATTGCTT TGGGCAGTAT GCTATTTTAA TGATATTGAT TCTTCCTATC
CATGAGCATG GAATATTTT CCATTGTGTT GTGTCATCTA CTATTTCCCT TAGCAATGTT
TTTTAGTTTT CCTGTAGAG ATCCCTCCTAG GTATTTTCATT TTTTATGTGA CTATTTTAAA
TGGGATTGCA TTCTTCATGT GGCTCTCAGC TTGAATGTTA TTGGTGTATA GAAATGCTAC

XX

XX

FIG. 6A(75)



09728552 . 122702

88/223

XX

XX

AGAGTTTGT AACTGATTC TGTATCCCTGA AACCTTACTG AAGTCATTTA TCAGTTCTAG
GAGCCTTTGG CAAAGTCTGT AGTGTTTCT AGGTATAGAA TCATATCATT AGCAAAGAAA
GATAGTTGA CTTCCTCTTT TCCATATTGA ATGCCCTTTTA TTTCTTTCCC TTGCTGATT
GCTCTCCAG TACTACGTTG AATAGGAGTG CTGAGAGTGA GCATCCTGT CTGTGCCAC
CTCTCAGGG AAATGGTCC AGCTTTTGCC CATTCAATAT GATGTTGGCC ATGGGTTTGT
CACAGATGC TCTTATTATT TTGAGGTGTA TTCCCTTTGAT GCCTAGTTG TCAAAGGCCT
TTATCATGAA GGGATGTTG ATTTATTGA AAGCTTTTC TGGTCTTAT TTGGTGAATT
GCATTTATTG AATTGTGCAT GTTGAGCCAA ACTTCCATCC CAGGATTAA ACCTACTTAA
TCATGGTGTT AACTTTTGA TGTGCTGCTG GATTGGTTT GCTAATTTT TTTTTTTTTT
TAAGATGGAG TCTCGCTCTG TCGCGCAGC TGGAGTGCAG TGGTGTGATC TTGGCTCACT
GCAAGCTCCA CCTCCCGAGT TCATGCCATT CTCCTGCCCTC AGCCTCCCGA GTAGCTGGGA

YY

YY

FIG. 6A(76)



09728552 . 122702

89/223

YY

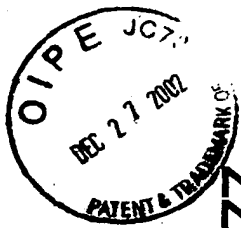
CTACAGGCAC CCGCTACCAT ACCCAGCTAA TTTTGTATT TTTTAGTAGA GACAGGATTT
CACCATGTTA GCCAGGATGG TCTTGATCTC CTGACCTCGT GATCTGCCCTG CCTCAGCCCTC
CCAAAGTGGC TAGTATTTTT TTAATTACTA TTTTTTCTCA CCCTTGCTGC CATCTTATGA
TTTTCTAGTA TTTTGTGAA GATTTTGCA TCTATTTTCA TCAGGGATAT TGGCCTGTAA
TTTTCTTTTT TCATTTCATC TTTACCACAT TTTTGTATCA GGTTCATACT GGCTTCATAG
AATGAGTTCA GGAATGGTCC CTCCCTCCTCG AATTTTCTCT GTAGAATTAG TACCAGCTCT
TTGTGTGTCT GGGAGAAGTT GTATGCCAAT AATTAAATG CAGTTAATAT TTACTGGACA
ATTTCCTCCA GATAATTGTA TATGATTTTT GTCCACCCT GAGTTGATAC ATGTATTTTA
ATTGTATCAT GGTATGAAA GAGCAAGAGT TATTGGTCA CCTAGTCTTG CCTATAGATG
TTGCCTAATG ATTCAAAGTA GATATTTGG GAGCCTAAC AGGTGCCGTG GACTAGGCAG
TTTTGTTTTT TTTTTTTTTT GAGGGACAGA GTCTCGTTAT GCTGCCAGG GCTGGAGTGC

ZZ

YY

ZZ

FIG. 6A(77)



09720552, 122702

90/223

ZZ

AGGGCATGA TGTAGGATCA ATGCAACATC CGCCTCGTGG GTTCAGAGCA ATTATACTGC
ATCAGCCTCC CCAGTAGCTG GGACTACAGG CTCACGCCAC CACGCCTGGC TAATTTTGT
ATTTTATGA GAGATGGGGT TTCACCATAT TGGCCAGGCT GGTGTTGAAC TCGTGGCCTC
ATGATCCACC CGCCTCGGCT CCCAATGTGC TGGGCTTACA GGCGTGAGCC ACCGCACCCG
GAGATTAGC AATTTTATAT TCCCAAATAT CCAACTCTC TGACCCGCTT TCTCAGCCTG
GGTGTATCAG GCACAAGGCC TGTTCAGATT ATGTGGTCTC TGAAGATATG GCTCTCCAGG
GTTGACAATG TGGATAAGGA TTCACCTGGT TTAGGATTTA CACATTGCGC TTGAATGTCT
GTTGCACCAA GTAGACAGTC CATCCCACT TGGCCATTG GTCAGAGCTG TAAGGAGACA
AGGAGGTGG CAGCCGCTGC TGTGAACTGC TTGGACAAAG ACTGCCAAAT AGCTATCAGA
CAGTGTAAAC AACAGCTGAT TTAGGTTTGA AGGGGCGAGT CTCTTGGGC ACTTACTATG
CTGCATCATC CTCTTTGGAA AATGCTCTTC AGGTAAGTGC CTAACAGACT GAGAAAATAA

AA'

AA'

FIG. 6A(78)



09728552.122702

91/223

AA'

AA'

AATGCTCACA GAGAAAAAG ACCCGGAAAG TCTGACTTCT CAGAGCTCAG TGTTTAGGTG
CAGAACTGGA TTGTGAAAGG ATTTTAAAT TTTTATATAT CATTGCAGGG AACATTCATT
TATTCCATCC TTCTCCACTC CCACCTGTCT GTCGTGTCT TGTCTCTGT CTCCCCACCT
CTCTCTCTAG ACACACACAC GCACACACAC ACACACACAC ACACACACAC ACACACACAC
ACACACACAC ACACACACAC ACACACACAC CCCTATTCAT TGCCAACAGT AATAGAGTTG
CTTCTTTACT TCTTGGAGAG AAAAGCCTCA ATCTGAGGAA GCTGTGCTGA CTAGCCTTGC
TCTTAATCAT GGAGACAATG CTTTATGCCT TTATCTTTGC ACAGCTGAAA GCCATGGCAG
AAGCAGTCCT CTAAACGAAA TAAATAGAA AGGTTCTCTG TAAGCCCTGG CAAATGCAGC
CTTCTATCCC TCCCCCAACA CTCACAGCTT CTGAGCAAGA TGTGTCTGCC TTCCAGGAGC
TGGGTGATGG GCAATAATGA GCAGAGCCAC GTGAAGGAAA GATGGGTGAA GAAATGTGTG
TGGAGTCATG CTGGCTGCAC TGACCATGAA ACAAGGATC TACCCCTCTA GTAAC TGCCC

BB'

BB'

FIG. 6A(79)



BB'

BB

TACTCCTTTG GTAACGTGTC TGAAATTATA ACTTGCCAGA AGTTCAGAAAG GACCTAGTGC
AGGTATTAGA GGAAATTTCGT AAGATTGAGC CATTTATTCC TGCACAGATA CATAATAATG
GACACGGGCC ATGGTGGCCA GCATTCTTGC TCTTGACAAT GGTGAAGGGA AGGGTTGTAG
GTCATGGCTA TGCTCTCAGA ATTATAATGG AAAGAAACAG CTCCTGAGTG TTTACTATGA
GCCAAGGGCT GTGCTAAACA CTTTACCATA TGATGACATC TTTTCTCAC AGGTATCAAA
AAACAATAGG ACATACCGGA TAGCTACAAT CTTTGGGGCC CTGCAAAACAC AATAATGTGT
ATTCTCTTCT TCAAATCCTA CATATTGCTA CAAACTGTAT CCTGAGGCA TATTCATTGT
AAAATAAAAA CATATAAAGT ACTACTTTTG TTTTGTGAGA TGGAGTCTCG CTCTGTCACC
CAGACTGGAG TGCAATAGCA TGATCGTGGC TCACTGCAAC CCCCTGCTCC TGGGCTCAAG
TGATTCTCCT GACTCAGCCT CTCAAGTAGC TGGGATTACA GCGCACGCC CCCATGCCCTG
GCTAATTTT GTACTTTTAA TAGAGACCAG GTTTCACCAT GTTGGCCAGG CTGGTCTCAA

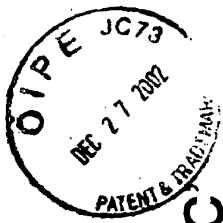
CC'

CC'

92/223

09758558 . 422702

FIG. 6A(80)



09/12/2002 14:00:00

93/223

CC' _____ CC'
ACTCCTGACC TCAAGTGATC CACCTGCCTC GGCCTTCCAA AGTGCTGGCA TTACAGCTGT
GAGCCACTGC ACCCGGCCCA TATAAGTAC TACTAATGTA ACAGGGTGCT AGTCCAGACA
GTGACCACAC GTGGTGTTCA TTGAAGGCTG GACTAACAAAC TCCAGCCTCT CCGCCATCAC
AGAGTGATGA CTGCCCTTCCC TGAAGCAAAG CTTCCTGGTTC AAGGAAAGGC CAGTAAAGTA
CTGCTCTTTG TTGTATACAT GTTAGATGAT CAGGCCTCAA GAAAAGTATA AAGAGATCTT
TGTGCTCTCT GGGACTCAAA AAGCTGCACT CTTTGGGGGA AGGATAGCCA GGTAAAAAGTG
GCCCAGGTAA AGAGGGCCTG GTACACCCTGG TTCTGCAAGA TGGTAGACAC AAAAATGAGA
GCTACATTG GAGCTTATGT GCCCCTAACT CTGTACATAA CCTGCAAGAT CTAATTACTA
ACAACTGGAA TCTTGGAAC ACCTGTAGTA CATCCTTGGC TAAGGTTAGC CCCAACAGAG
AGGGCTCTCC TCTTACAGAG AACCATTA TTTGTGCCTT CATCCTAGAG TAGAAAAGGC
ATGATCAGAC TACTAAAAAG ACATCAGGAA AGGGCCTGTG ACATCTGAGG GAAAGTGGTG
DD' _____ DD'

FIG. 6A(81)



09728552, 122702

94/223

DD' _____ DD'

CCCTCTCTGG GATGTTGGTT CGGGAAGAGG GGCATGGAGG AGTGCCCTGCT TTAGATGGTC
ATTCAGGAAC CCAGGCTGAT AGTGAGAGGT GAAGCCAGTT GGGCTTCTGG GCTAGGGGGG
ACTTGAGAGAA CTTTGTGTGTC TAGCTAAAGG ATTGTAAATG CACCAATCAG CACTCTGTAA
AATGGACCAA TCAGCAGGAT GTGGGCAGGG CCAAATAAGG GAATAAAAGC TGGCCACCAG
AGCCAGCAGT GGCAAACTGC TCAGGTCCCC TTCCACGCTG TGGAAAGCTT GTTCTTTTGC
TCTTCACAAAT AAATCTTGCT GCTGCTCACT CTTTGGGTCT GCACTATCTT TATGAGCTGT
AACACTCACC GTGAGGGTCT GTGGCTTCAT TCCTGAAGTC AGTGAGACCA CAAACCCACT
GGGAGGAACA AACAACTCTG GACACGCCAA CTTTAAGAGC TGTAACATTC ACTGCCAAGG
TCTGCCGGCTT CACCTCTGAA GTCAGCGAGA CTATGAACCC ACTGGAAGGA AGAAACTCCA
GACACATCTG AACATCTGAA GGAAGAAACT CCAGACACAC CATCTTTAAG AGCTGTAACA
CTCACTGCAA GGGTCTGCGG CTTTCATTCTT GAAGTCAGCA AGACCAAGAA CCCACTGGAA

EE' _____ EE'

FIG. 6A(82)

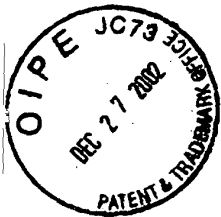


09/28/00 12:42:02

95/223

EE' _____ EE'
GGAACAATT CCGGACACAT TTTGGTGACC CAGATGGGAC TATCACCAAG TGGTGAGTAC
CATCAACCCC TTTCACCTGT TATTCTGTCC TATTTTCCCT TAGAATTCGG GGGCTAAATA
TTGGGCACCT GTCAGCCAGT TAAAAGCGAC TAGCATGGCT GCCAGACTTA AGAAACTAAA
GACACGGGTG TCAGACTTTC TGGGAAAGGG CTCTCTAATA ACCCCCAACT CTTTGGAGTT
GGGAGCGTIG GTTTGCCCTGG AACCAGCTTC CACATTTCCT GTACTTCTGG GCTGAGACGA
GGGTCAACAT AGAGGAAAGC CATTCAAGCTC TGGGGTCCCG ACAGCAAGTT GGTGAGCCCT
GTGGCCATGA TCACAACTCT CGAAGTCATG TTGCCCCAAGC GAGACTCACC CATCTATCCT
ATCTATCCTG ACTCTTGCTT CCTGGGTCCT AATGCCCTGGA AGACAAAACCT TCCCTCTTGT
TCTGTTCTCC AAGGCTAGTC CCACTTCTAA AAACCACTCC CTGTCTCTGG TGCTTTTCTA
GTTTCTCCTA TAAGAATGAT TTCTAGTATA AACTCCAGGA CTCTATTCTC TTCTTTAGGC
ACCCGGGCTC ACCAATCAGA AAGCCATAAT TTTTGCCCAA AGCCCATCT TAGGGGGAC
FF' _____ FF'

FIG. 6A(83)



0970552 123702

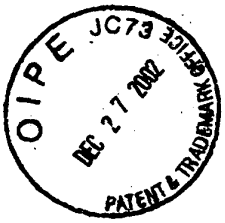
96/223

FF'

TATCTGGAAT TTTAGGATCC CTCCTCAGAC AAGCAGGCCT AACAAAAGCT ATTCCCTGAAG
CTAGGATATG GGGAGCCTCA GAAATGATAT CCTTCCTATT CAAGTGAGGA CAAAAGGCAT
CACTCTTCCA ATTCTGGAGA TCCCTTCCCT CCTCAGGGT ATGGCCCCCTCC ACTTCACTTT
TGGGGCATAA CGTCTTTATA GGACACGGGT AAAGTCCCAA TACTAACAGG AGAATGTTTA
GGACTCTAAC AGGTTTTC AAATGTGTCG GTAAGGGCCA CTAAATCCGA TTTTCTCTCGG
TCCTCTTTGT GGTCTAGGAG GACAGGTAAG GGTGCAGGTT TTCAATAATG TGTGTGTAAG
GGCCACTAAA TCTGACATTC CTGTGTCCTC CTGTGGTCT AGGAGGAAAA CTAGTGTTTC
TGCTGCTGCA TCAGTGAGCG CAACTATTCC AATCAACAGG GTCCAGGGAC CATGTGGGT
TCTTGGGCAA GAGGTGTTTC TGCTGCTGCA TTGGTGGGCT CAACTATTCC AATCAGCAGG
GTCCAGTGAC CTTTGCGGGT TCTTGGGTCG GGGGTGGGG GGAACAAACA GACCAAACT
GGGGGCAGTT TTGTCTTTCA GATGGGAAAC ACTCAGGCAC CAACAGGCTC ACCCTTGAAA

GG'

FIG. 6A(84)



097/223 122702

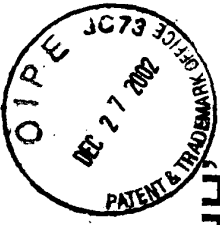
97/223

GG' GG'

TGTATCCCTAA GCCATTGGGA CTAATTGAC CCGCAAACCC TGA AAAAGAG TGGCTCATTT
TATTCTGCAC TATGGCCTGG TCCCAATATT CTCTCTCTGA TGGGAAAAA TGGCCACCTG
AAGGAAGTAT AAATTACAAT ACTATCCTGC AGCTTGACCT TTTCTGTAAG AAGGAAAGCA
AATGGAGTGA AATACCTTAT GTCCAAACTT TCTTTTCATT AAAGGAAAAT CCACAACTAT
GCAAAACTTA CAATTCACAT CCCACAAGAA GAACTCTCAC TTACCCCCCAT ATCCTAGCTT
CCCTATAGCT CCCCTTCCTA TTAATGATAA GCCTCCTCTA TCTCCCCCACC CAGAAGGAAA
CAAGCAAAGA AATCTCCAAA GGACCACAAA AACCCCTGGG CTATCGGTTA TGTCCCCCTC
AAGCTGTAGC GGGGAGGGG AATTGGCCC AACCCAGGTA CATGTCCCCCT TCTCCCCCTC
TGATTTAAAG CAGATCAAGG CAGACCAGGG GAAGCTTTCA GATGATCCTG ATAGGTATAC
AGATGTCCCTA CAGGTCTAG GCCTAACCTT CAATCTCACT TGGAGAGATG TCATGCTATT
GTATAGTCAA ACCCTGGCCT TTAATTTAAA GAATGTGGCT TTAGCCACAG CCCGAGAGTT

HH' HH'

FIG. 6A(85)



09/2005/21/2005/21

98/223

HH'

HH'

TGGAGATACC TGGTATCTTA GTCAAGTAAA TGATAGAATG ACAGCTGGGG AAAGGGACAA
AGTCTCTCCC GGTCAGCAAG CCATCCCCTAG TGTGGATCCC CACTGGGACC TAGACTCAGA
TCATTGGGAC TGGAGTCGCA AACATCTGTT GACCTGTGTT CTAGAAAGAC TAAGGAGAAT
TAGGAAAGAG CCTATGAATT ATTCAATGAT GTCCACCCATA ACTCAGGAAA AGGAAGAAAG
TCTTGCCCTTC CTTGAGTGGC TACAGGAGCC TTAAGAAAAT AACTCCCCCT GTCACCCAAC
TCACTCAAGG GTTAATTGAT TCTAAAAGAT ATGTTTATTA CTCAATCAGC TGCAGATATC
AGGAGAAAAGC TCCCAAAAGC AAGCCCTTGG CCCTGAACAA AATTGGAGG CATTATTAAA
CCTGGCAACC TTGGTGTCTT ATAATAGGG CCAAGAGGAG CAGGCCAAAA TGGAAAAGCG
AGATAAGAGA AAGCCACACAG CCTTAGTCAT GGCCCTCAGA CAAACAAACC TTGGTGGTTC
AGAGAGGACA GAAAATGGAG CAGGCCAATC ACCCAGTAGG GCTTGTGTC AGTGTGGTTT
GCAAGGACAG TTTAAAAAAG ATTGTCCCTAT GAGAAACAAG CTGCCCCCTC ACCCATGTCC

II'

II'

FIG. 6A(86)

II

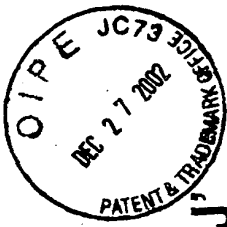
2

ACTATCGCTG AAGCAATCAC TGAAGCCAC ACTGCCCCAA AGGACAAAGA TTATCTGGGC
CAGAAGCCCC CAAGCAGATG ATCCAACCAC AGGACTGAGG TGCTCAGGGT TAGCGCCAGC
TCATGTCAAT ACCTCACTGA GCCCTGGGTA CATTAAACCA TTGAGGGCCA GGAAATTGAC
TTCTACTGGA CACTGGTGCG GCTTTCTCAG TGTTAACCTC CTGTCTTGGA CAGCTGTCCT
CAAGGTCTGT TACCATCCGA GGAATCCTGG GACAGCCTAT ATCCAGGTAT TTCTCCCCACC
TCCTCAGTTG TAACTGGGAG ACTTTGCTAC AGATAGTAAG TATGCTTACC TAATCCTACA
TGCCCCATGCT GCGATATGGA AAGAAAGGGA ATTCTAACT TCTGGGTGAA CCCCCATTAA
ATATCACAAG GAAACTATGG AGTTATTGCA CACAGTGCAA AAACCCAAGG AGGTGGCGGT
CTTACATTGC CGAAGCCATC AAAAGGGGAA GGAGAGGGGA GAACTGCAGC ATAAGTGGCT
GGCAGAGGCA GGGAAAGACA AGCAGAAAGG AAAGAGAGAA AGAGCAGAAA GTGAGAGAGA
AAGAGAGATA GGAAGTGATA GCAAAGAGGG AGTCAGAAAAG AAAAGAGAGA GGAGAGAGAC

لے

ll

FIG. 6A(87)



09728552 . 422702

100/223

JJ'

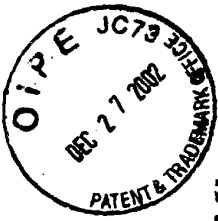
JJ'

AGGGGAAAG ACAGAGAGAG ACAGAGGAAG AGACAGAGAG ACAGAAAGAG AGAAGCAAAG
AGAGGAAGAG ACAAAGAAGG AGTCAAAGAG AGGGAAGAG AAGTAGTAA GAAAAAACAG
TGTAACCCTAT TCCTTTAAAG GCCAGGTTAA ATTTAAACC TATAATTGAT AATTGAAGGC
CTTTCTGTT AACCTATAA TACTCCCAAT ACCACCTTGT TGTTCAGTGT TAAACAAGGG
TTATTAGCCC AAAAGCCACT GAGGCCACTG ACAACCCGTA GCCTTCTTAT CCAAAATCCT
TAACACAGCA GGTTCCTAA CAGGGATCTA ATCTTAGGTC GACCAGACTG GAGAACTGCC
TTCAGGACAG GATGATAGAT GGTTCCTCCC AGGTGATTAA GGAAAAAGAC ACAATGGGTA
TTCAGTAAGT GATAAGGAAA CTCTTATAGA AGCAGAGTTA GGAAAAATTGC GAAATAAGTG
GTCTGCTCAA ACGTTGAAGC TGTTTGCTGT TTGCACTCAG CTAACCTTA AAGTACTTAC
AGAATCAGGA AGGAGCCATC TATACCAATT CTAAGTTAAT ATGGACTGAA CGAGGTTTAA
TTAATAGCAA AGAAAATTAA AATCTCAAC TTACGAGGTT TTCAAGTAA GTAAAGTTTG

KK'

KK'

FIG. 6A(88)



09/2005 12/2002

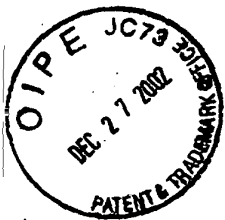
101/223

KK'

GTAAAAGTTA ACAGCGTAAC ATGTATTATC CTAGTACCAC ACATTCTCTC AAAGGATTTG
CTCAGACAGT TTGCAAAAAA GAACGAAATC TGTCTTACT CTACAATCCC AAATAGACTT
TTGGCAGCAG TGACTCTCCA AAACCGCTGA GGCCTAGACT CTCATGTTGA GAAAGGAAGA
TTCCTGCACTT CTTAGGGGTA GAGTGTGTT TTTATACTAA CCAGTCAGGG ATAGTATGAG
ATACCACCCA GTGTTTACAG GAAAAGGCTT CTGAAATCAG ACAATGCCTT TCAAACTCTT
ATACCAACCT CTGGAGTTGG GCGACATGGC TTCTCCCCCTT TCTAGTCCCT GTGACAGCCA
TCTTGCTAAT AGTCGCATTT GGGCCCTGTA TTTTAAACCT CTTGGTCAAA TTTGTTTCCT
CTAGGATCGA GGCCATCAAG CTACAGATGA TCTTACAAAT GTAACCCCAA ATGAGCTCAA
CTAACAACTT CTGCTGAGGA CCCCTGGACC GACCCGCTGG CCTTTTCAAT GGCCTAAAGA
GCTCCCCCTCT GGAGGACACT ACCACTGCAG GGCCCCCTTCT TCACCCCTAT CCAGCAGGAA
GTAGCTACAG CGGTCATCGC CAAATCCCAA CAGCAGCTGG GGTGTCCCTGT TTGGAGGGGG

LL'

FIG. 6A(89)



09728552 . 122702

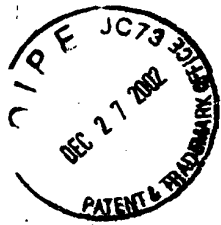
102/223

LL' _____ LL'

GATTGAGAG TGAAGCCAGC TGGGCTTCTG GGTGAGGTGG GGACTTGAG AACTTTTGTG
TCTAGCTAAA GGATTGTAAA TGCACCAATC AGCACTCTGT GTCTAGCTAA AGGATTGTAA
ATGCACCAAT CAGCACTCTG TAAAATGGAC CAATCAGCAG GATGTGGGCG GGTCAAATA
AGGGAGTAAA AACTGGCCAC CCGAGCCAGC AGTGGCAACC CACTCGGGTC CCCTTCCACA
CTGTGGAAGC TTTGTCTTT TGCTCTTCAC AATAAATCTT GCTGCTGCTC ATTCTTTGTG
TCCACACTAC CTTTATGAGC TGTAACACTC ACTGCGAGGG TCTGTGGCTT CATTCCTGAA
GTCAACAGAC CACGAACCCA CTGGAAGGAA CAAAGAACTC CCGATGTGCT GCCTTTAAGA
GCTGTAACAC TCACTGCGAA GCTCTGCAGC TTCACTCCTG AAGTCAGTGA GACCACAAAC
CCACCAGAAG GAAGAACTC TGGACACACC TGAATATCTG AAGGAACAAA CTCCAGACAC
ACCATCTTTC AGAGCTGTAA CACTCACCGC AAGGGTCTGT GGCTTCATTC TTGAAGTCAG
CAAGACCAAG AACCCACCGG AAGGAACAAA TTCCAGACAC AGTAGGAAAT CTGTATTTTT

MM' _____ MM'

FIG. 6A(90)



09720552 . 122702

103/223

MM'

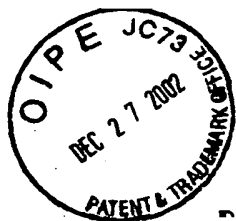
MM'

GATCTGTGGC TTCCAGGGTT ACTCCAGTCA TTGAAGTCTC CATTCAGGCC TTAAGGAAAC
AGAGAATGGT TTGGAGGAGC ACATGTGGGA ATTGTTATGG ACCAGGCTTG AGATGCACAT
AGGGCATTTC TGATCAAACC TAGCTGGAAG CAGGGCCAGG AAATATAATC TAAGGAAGAC
AGTTTTTGTA GACAGTAGTA GTCTTTGTCAT CTGAGACATG TAGATTATCA AGCAATTAAAT
TAGAAAAAAT ATAGCCAGGT GCGATGGCTC ATGCCCTGTAA TCCCAGCACT TTGGGAGGCC
AAGGGGTGTG GATCACGAGG TCAGGCGTTC GAGACCAGCC TGGCCAACAT GGTGAAACCC
CGTCTCTACT AAAAATACAA AAATTAGCCT GGTGTGGTGG CACGCATCTG TAATCCCAGT
ACTCAGGAGG CTGAGGCAGG GGAATCTCTT GAAC TTGGA GGCAGAGGTT GCAGTGAGCC
AAGATCACAC CACAGCACTC CATCCTGGGT GACAGAGCGA GACTCTGTCT CAAAAA
AAAAAAAAA GGAAAGGAAA ATATAATCAA GAATATTGAC AGTAAACATT TATTCAACAC
TTACTATGCA CCAGGCAATA CACTAAGTGT TTACATGGA TTAACATCATT TAATCTTAAC

NN'

NN'

FIG. 6A(91)



09728552 122702

104/223

NN' _____ NN'

AAAGCCCTA TGAAGTCAGT GCTGTTATTA TCTCCACTTT ATAGATAAGG AACTGAAGT
ACAGAAAGGT CAAGTAGAGA AATGGCCATG CTTGCATTCT CAGTTTTGA AGCAACTGTT
ACAGGAATCT GGTGTGAGAA ATGCTCTAAC AAGATGTGAG TCAGGGGTTG GGAGGTACTG
AGTCTGAGTT GGCAGTTGG GGATGGAAG ATGGATGAAG AACAGCTTGA CAGAGAAAGCT
GACACTTGGC AACTCTGTGG GACCTTGAAG GGTAGAGGG ACTTCACCAA AGAAACTGGT
GGTCAGGGAT ACGGGAGGGT CACGGCAAG AGGAAAGGA AACTGTACCA CAGCAGAGAG
TCTGAAGCTA CTACAGTGTA GTTCAGCGTA TAAAGAATAA TTATTTTAAG GTAAACTTAT
AACCTCATGC AAATATAAAA TGAACACGTG TCAAAGATCT TATTTAATTT ATTAATTAAT
GAGGGAACCT GTAAGATGTT ACAGCCAGTT CAAAGGATAA TTCAAATAAA TCCATGCACA
TATGTAGGCA ATAAGGAATG CTGAAATGAA TTTAAAAGTA GATGTAAACT GATTATCCA
CAGAGAAATA ATCAGTTGCA TTTCACATAA CAAATTCAG TTGCTTTTCT ACAGAAGGAA
OO' _____ OO'

FIG. 6A(92)



00728552 . 122702

105/223

00' _____ 00'
TTGTTTGCAAT CATTACCAAT TTTTCTACAA CTAACAGAAT TATAAAATAA CTCAAACACA
ATGAAAGGCA GATAAACC ACAATGGTAT GATAGATACA ATATCCACAT CCAGGATGTT
TTTTTCTCAT TTCAAAGTCT TTCACAAGTT TTCTTGATAA GGGAGTGTCATAATACTGT
ATGGCAGGCA ATAAGACTGG ATGGATGGTT GGGGCCAGGT TTTAAGGGGT AATAAATGCC
ATGTAAGGT ATGTGCATAC TGTGCAACAT GTCGGGGAAT CTCAAATTAT TGGTAGAGTA
TGTAAGAAAC ACTTGTTGAG CTTGTTAATA AATCAAATT CCCAGACCCA ACTCCTCAAG
GGTCTAATAC AGTAGGTTG GAGTAAAGCC TGAAAATCTG CAATTGTGCA AAAAAAAAAA
CCCAGGTGAT TCTGATACAC TTTGAGAAGC ACTGGTGGAA CTAATAGTCA CTGAACGTTT
TTGAGCAGG GAGAAACCTG AGGACGTCTA TGTTCAGCA GTGAAACTT GATTAGAAGT
AGGAGAAGAT GCATGGTCTT AAAAGAATGC AAAATGATGG CTAATATTG AGTGCTTATG
ATGGGCCAGG GGCTGTGCTA GGCGCGTGGC ACACATTCAA TACGATGGAA GCCTGTACCA
PP' _____ PP'

FIG. 6A(93)



09728554 122702

106/223

PP'

GTCAGTATTA GTGGGGTATC TTAAAGAGTG ACCAGAAATTA AGGGGGGTTT TCACCAAAGC
CTGAGGACTG AGCCTCCTCA TCCTAAATTC AGACACAATG CTGTACCTAT GCATTGTCCT
CCAGGCTGTT CCTGGGCCTC CAGGACTGG CCCAGGCTCC TGATAAATAG GGACTCCCAA
CAACATAAAG CCTGGATTTT GGAACCTCCT GAATGTTACT CAGGCTTTCT AGTAACTGTG
GAGATCTGAA TAATAACACA ATTCTAAGTT CCCCTACTCA TAAAGCTGCT CATCATTTAG
ATGGGGTAAA GCACCTGAAA TACAATGAGC ATCACTATTT TCATTCATCC ATGAAATGAA
CATTCGGGG AGATCAGTAA GTTGATGTAT CACCCTTGAA CAGGGCAAAA TGAATACTCA
CCAGGAATAT GTGGTATTTT AAAAAGAAGG CAAAGGGAAG AATAGTGGG ATGGGGCAAA
AACTTTAAAT AGATTCCCCC AATCATATAT GGCAATTGAA GATAATTAAA TTATCATTTT
AATTGAGTAA GTACTCATAG AGCCCTCACT ATTTGAAAAT GAACTGCCCTC CTAATTGTTA
TTGTGCAAAT GTGATACATT AAACCTAAGC TATTTTAATA AAACATCCAT TTTCGGGAAGC

QQ'

QQ'

FIG. 6A(94)



QQ

QQ'

TGTAAGTAGG TCTCCAGGT CAGATTGAT AAGCCATAAA GAACAAATGC CAACTCCTAT
TTTTCTATGG TGCTGGGAAA TAAGAGAGAA ATGTGTAATT CAAAGCAATC ATTTAATTTT
ATCCAATAGC TTGATTCTCC TCTCTCTTCT AGCCTTTTAG CTAAGCTGTT ACCAAGTAAC
CACACTAGTT GGCTTGAGTC TTACCACGTGTTCCCTGACC CCACAGTGGA GAGACTGCAT
CTGTAAAGA GCAGTTATGT AACCATGGCT ATGCTGAGCT GGGATTCCCA AGGCTTAGGT
TCTTTCTGTG AATGACCTTC ACCAAGACAC CTGAGGTCTG TGTGGAACCA CAGGCTTGTC
ATCTCTAAGG CAGAGTTGAT AATCCATCT GTTCTCTGAG CCCACACTGA GAAAAGATT
ACATGACTGC AGTTATTGA ATGCCTCATG GAAAGACGTC TTATAAATAT TATAATTAAT
GTTATCATTA AGTAATGCTT CAATGCAGAT CTCCAAGTA TAAATATCAG CTGAGTAAGA
AGTCAATCTT CCCTGAAGCA AAATTGAAAT TTGTAAATGC GATTCTCTGG AGCTTATTTT
GTAATACATG ATTCAGAGT GTCCATAACA CACACAATTG TCTTTTTCCT CCTACATGGG

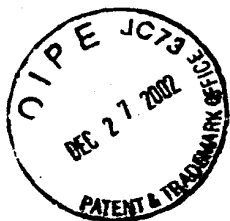
RR'

RR

107/223

09/20/55 16/20/04

FIG. 6A(95)



001100552 122202

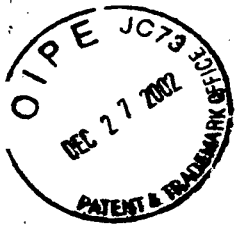
108/223

RR'

CTATTACAA CAAATGGA CTTATAATGT TTATTCCAG GGATGACTAG AACTTTAATA
ACAAACCTTG GGCCAGGCAT AGTGGCTCAT GCCTATAATC ACAGCACTTC GGGAGGCTGA
GGCTGGTTAG ATTACTTGAG GCCAGGAGTT TGAGAACAGC CTGGCCAACA TGGCAAAACC
CTGTCTCTAC TAAAAATACA AAAATTAGCC GGGTGTGGTG GCGCATGCCA GTAATCCCAG
TTACTAGGTA GGCTGAGGTA CGACAATCGC TGGAACTTGG GAGCGGAGG TTGCAGTGAG
CTGAGATTGC ACTACTGCAC TCCAGCCTGG GTGACAGAGA AAGACTCTGT CTCAAAAAAA
AAAAAAAAT AATAATAATA ATAATAAACC CTGATGAAAG GTTTCTAAAA TGTTTTCATC
TAATGGTTT CTTGACAAAT AAATTTTCTA TATAATGTCA GTTCATAAAA AACTGAGAA
CGACCACATG TCATATCGAC TGCTTAAAG AAAATACGTA TATTACAAA CATATACACA
ATACTGTCTT TTGTCTGGTT AGTTAGAGG TTAGATAAAC TGCAGTATGT TGAGTGGAC
AGATCATAGA ACTAGGAGTC AGGATGTCTG GATTCCTAGG AAGCAATGAA TAGGTTGCAC

SS'

FIG. 6A(96)



09728552 122702

109/223

SS'

GGTGCAGCTC AAGTTATTC AAAGTGTGGT GCCCAGACCA GCATCATGAG TATCCTCAGG
GAGCTTGTTA GAACTGCAGA TCCTTTAACT CATTGAATCA GAATCCCTAG GTGTGGGGCC
CTGAAATCTG TATTTTAGCA GGCTCTCTGG GATTGTGATG TGCCTTAGAG TTTGACAACC
ACTGGGTAGC TGATCCTGAC TTAGACTTAT CAGGCATGTG ATCTTGAACA AGTCACATAA
TCTCACTGAG TTCAGTTTTC TTATGTTTAA AATAGGCCCA ATAATATCTA TTTCACATGG
ATTGCTTTGA GGATTAGGCA AGAGATCTGT AACAGACACT GTAGAACAGT GTCTCTGTGC
TACAGCTGAC CTTCCATAAA TGGTAGTTGC CTTGATTCTC TGCTCTGCCA CATAATAGCT
GGTTAACTAT GAGCAAGTAA TTTAGTTCTT CTCAGTTTAG TTTCTTCCCC TGTAAGAAGA
GGAAAATAAC TGTTATACTC CATTCTCTGAA TTGCTATAAA AGTCATTTAA TTATGGGCAT
TGAAGCTCTT TGTTCACCTGT ATAAGGACTG TACATCTAAG GGATTAAATGA GACCAGGCTT
ATGATTTTAA GCATGGAGTA AATAGTAACA CTGACTCTGT TCTATGAACC ACATGGAAAC

TT'

SS'

FIG. 6A(97)



09728552 . 122702

110/223

TT'

TT'

TCCTAAGAAT ATGCACATTT GAAACACAGG TATCATCTGG GGAAGGTGAT CTGCTCACCC
AAACCAGTTC ATGAACATCA ATCTCCAGTG GCGTGCTGGA GCTAGCTGTA CCAGCTCATG
AGGGCCAATT GTTTCATTTT TAGGAATTTT GTTTGCTGGT TAAAAATAGT CATTATTAA
AATTAAATTA TGTAACAAT AATATTAGAT AAAATAAGTT AAAATAAAA CAAAGGAAC
AATTATCCCC AACTCTTCC CCACCTAATT ATTTACTAT CTGTGCCCTG GGATTATT
CATTGATTTT ATCCATATGG TGACAATACT ATTCATATAT AAATGGTGTG CTTCTCTTCA
TAACTCTACA TAGCCTGATG TCAGGCTAGT AGCTTGAAAT TGGCCACAGT GGGAGTGTGA
GCATTGTGAC CATGAGGCTT GGCCAAGGCT ACAAAATCCAG ACTTTTGT TTCCCTCCTG
GAGAGCTGTC TGTAAAAAT TTACCAACAC ACCACTGGTC TTACCTTTGT TAATTACCA
CAGTCCAGGT TCTGACCCTAG ACTTAGAAAC CTGGATTGT CAGCAAGCTG AGGATAGAGC
CATTATTCT AAGAAGGACT CACATTACCC AAGTGCAAG CCTGATATAT ACCTTCAGAA

UU'

UU'

FIG. 6A(98)



09728552.122702

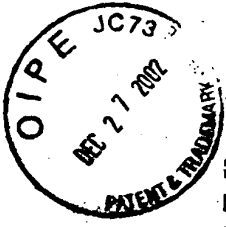
111/223

UU' _____

TATCAATTTA TTAATTTACA GTGAAGAAAG CCACCCCCAGG GCATTCCCCA GGGGAAGGCA
AAAAGAGCTA GTTGACACATT TTGAATGTTT GATGACATTA GGTAAAGGTG ACACAGAATA
TCCATTCCA CAACTGAGAT ACCTGCTGCC TTAAGGAAGG GACAGGCAAG TCCTTGGGCA
GGACCTTAGA TTGTCACTGT CCATCTTGCT GTAGGACTCT CCTTTCCAGG CATGACGATG
GCCAACTCTG TCCTCCTACC CTA CTGATGG GATTATCTTT TCTTGACACA TGGCAATGCC
TCCAATCAGA GGCTGGTAGC TATTTTAAAT CTTCAGGGCA GTATTTTCA AAGGGAAGTT
CATGGACCAT ATGCATCTGT ATCATTTAGA TGTATATTAA AAATGCTTAG TCTTCCCCAG
TTATACTAGA TCAGAATCTC TGTTGGTGGG GCCCACGAAT CGGTATTTTC AACAAATCAC
TAGGTAATT CTGTATATAC TATAGTGTGA AGACCACGTC TTGAAGGTTT CTTTGCAATAT
CTCCACTAAA TATAAAAAAT ATTGACTTCT AGATTTAACT CCCAAAGCAC TTGCATTTTT
AAGTTTCTGG GGCATTATA TTGTGGTACC CCTATACCAC TCACACTCTA GTCAGGAGGT

W' _____

FIG. 6A(99)



00700550 . 1227002

112/223

WW' _____ WW'

ATATTATGGA CTGAATGTTT GTGTCCCTCC AAAACTCATA TGTTGAAGTC TTAGCTTCCA
ATGTGATAGT ATTAGGAGAT GGTGCCCTTCT GGAGGTAAAA TCAAGCCCTC ATGAATGGGA
TTAGTGCCCTT TAGAAAGAGA GTCGTCACCT GTCTTTCCAT CAATTGAAGA TGCAGTGAGA
AGCTGGTAGT CTTGCATCTG GAAGAGGGCC CTCACACAAC CTGATCATGC TGGCACCTGG
TCTCAGACTT TCTGCCCTCCA GAACTATGAG ATGATAAATT TCTGTTGTTC ATACCCACC
CAGGCTACAA TATTAGGTTG CTGCAAAGTA TTTGTGATTT TTGCCCTTTAC TTTTTCAGGC
AAAAACTGCA ATTACTTTTG TGCCAAACCTA ATATTTTGTT ATAGCAGCCC GAACTAAGGC
AAGGGAGACT ACATCAGACA GTGTAGCTAT GTAAGTACAA ATGTATCCCT GTTGAAGGAA
AACTAAGTTC TAACCCCTGAC TTCAGGCCAG TAGCCACCTT TTCAATCTCT TTCATGAAGG
GACCATTATC ATTATCACTG GTGGCAAAA TAGAGCACGA GAATGGAATT TGCTTTTCTG
TGAAATCTCA GTGTATACAG ATGAAGAGCA AGGTTTGCT TTCATCTCTA AGAAGCAAAA

WW' _____ WW'

FIG. 6A(100)



09/28/52, 12/2/02

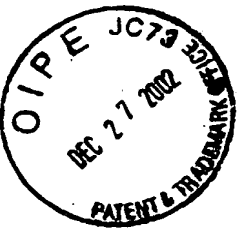
113/223

WW' _____ WW'

GTGAGTACGG ACTGGCACAT TATCAGAGAA AGAATCATTC TAGTCGGTG GGTCTTAACC
AGGAGTGAAT TTGACTCCAG GGAACAGTTG GCAATGTCTG GAGACGTTT TATTGTGTTAT
AGCTGGGGA TGAGTGGGTG GGTGCTACT GGCATCTAGT GGGTGGAGAC CAGAGATGCT
GTTAAACATC CCGCAAAGCA CAGGACAGTC CCCGACAACA AAGAAATTATC TGGCCCCAAA
TATCAATAGT GCCAAAGTTG AGAAACCTCA TTCTAGCTTC CTTTCCCTT CTACGTTCTA
ATCAACTGTT GTTCTTTCAG CATTAGGATT CATCCAGCAG TCTCTTTCCC CAGCAATTG
TTGAAATTTT TTTAAAAATG GACTCATTTT AGTGTACAA GAAAAAATA CATTACACAG
AAAGGATGGG TCATTTTGTT TAATGATGTT TTGCCTTTCA CATAGCAAAA GCTTAATAAA
GTATTTTAA ATAAAATGGT GAATAGATCA AAACATTAAAT TTCACATGTG TTTTAATAAA
TAACAGGAAG ATGGCTATAT TATATAAATT GTTCTTGAT ATGTCTTGAG TGGATCATCA
AACACAAACG TATCTACATG CCTTTTCTTG TGAATAGATC TAATAATAAC GCTCTTCTAA

XX' _____ XX'

FIG. 6A(101)



09728552.122702

114/223

XX' _____ XX'

AAACAAATTA AATGGATATT ATTTGCTGAG AATGTAATGC TTGTGTGAAT AGAAGCCAGC
CCTGAATCCA AGCCCCCAGA TCTATTTAAA GAATTGGAAG AATGTCAGAA AAGCACGTGG
CTTCAAGGTT AATGTGTAAG ACTCACAGAA ACTTGAAAAA TCACTATGAC TAAAAAGAAA
GTATGAGCTC CCTGCATGCC TGTAATTTGG AATGACAGCC AAAACCAGTT AATTATATAA
ACAGCTAATT TAACAGGTTT TCAAATTTGT TTCTTTCTCC AAGTAGCATA TAGTCAATAA
TCCTTAAAGA GAAAGCAAAG AAGGGAAGC ACTGAACCAA ATTTGCTTTT TTGTACCTGC
TCAGCTCAA TGCAGAGTTC TCTACCTGGA AATTGACTGC TTCCATAGTT TGATAGCCAC
AGAGAGATGG GAACAGAAGG AGAGGTATAA TCCCAGACTT GATTCAGCTA TAGAGAATGA
CAATAGTGC AGAGGCCTTC CAACCAGAGC GACTCCATCT TGAATACGGG CTGGGTAAAA
CAGGGCTGAG ACCTACTGGG CTGCATTCCC AGGAGGCTAA GCATTCTAAG TCACAGGATG
AGACAGGAGG TCAGCACAAG ACCTTGCTGA TAAACAGGT TGTAATAAAG AAGCCAGCCA

YY' _____ YY'

FIG. 6A(102)



09728552.122702

115/223

YY'

YY'

AAACCCACCA AAACCAAGAT GGCCATGAGA GTTATCTGTG GTTGGTCTCA CTGCTCATTTG
TATGCTAATT ATAATGTATT AGCATGTATA AAGACACTCC CACCAGTGCT ATGACAGTTT
ACAGGTACAT TGGCAACTTC CGGAAGTTAC CCTCTATGGT CTAAAAAGGG GAGGAACCCCT
CACCTCCCAG AATTGCCAC CCTTTCCCTG GAAAACTTGT GAATAATTCA CCCTTGTTCA
GCATATAATC AAGAAGTAAC TGTAAGTATC CTTAGGCCAG AAGCTCAGGC CACTGCTCTG
AATGTGGAAT AGCCATTCTT TTATCCTTTA CTTTCTTAAT AAACCTTGCTT TCACTTTACT
GTATGGACCC CTGTGAATC TTTCTTGCAA GAGATCCAAA AACTCTCTCT TGGGGTCTGG
ATCAGGACCT CTTCCCAGTA ACAATAGTAG TAAGGGGTCG GGGAAACTGG ACAAAGGAGT
TTAAGAAGCC TTAGATAAAG GGTCTCATC ATTGTCATAA CATAAAATCA TGGACTCCTA
GAATTTTATA GCTGATAGGA TTAGAAATTT CAAAATTCAA TTTCATTAAT TTTTCATCTGC
GAAAACAGAT GGCCAGAGAG GCCAAACAAT TTGTTAAGGA GCACTGAGGC GATGGAACAC

ZZ'

ZZ'

FIG. 6A(103)



09728552-122702

116/223

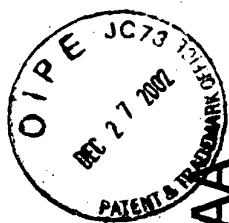
ZZ' _____ ZZ'

CACACTGGAC CGCAAACCTC CTAGCAGAGT ATACAAGGCC TTTGATCTCC TCAGTCAGAA
TGAAC TAGAG CTTTCCAGGG GTACCCCTTC TGA CTGTTA GCATGTTGC CAGTCTGACT
AATTTGAAG TTGCTTAAAT ATCTGTCATT TCCACTGTAT CATAATCTCC TCATTTCATCT
TCAATCTCCA ATGCCCTTGAA CTCAGTAAAT GTAGTTGAA CAAAGTAAA TTGAACCCAG
AATTTCTGAT CATAATCTGG AGCACTTTAA AATTGTCAGC TTA CTGGGA ACGGGATAAC
ATGTGATTG TCTTTGATT TTTTTTTCTC ATATGCTTTT TCCACCTATA GATGCTACAC
GAATGTTTT AAAATCTGAT ATAAAAATTA AAATTA AAAA ATTA AAAA GAAATTTGA
TACAATGCTA CATTAGAGT GTTGATTA GATTCCTTAA GTGTATCATG GTGATCTCTA
CATCACGTGG TGATCAAATT GCTTTGGGT TTAACACATA ACTGACAAAG GCTTGGGAC
ATGTAAGATC CCAATACAT TTTTATTGAT TTTTTTTTCT TGTGTGCTCT CTTTAAATA
ACTTTTTTT GTTATAAGAA TAATTCATGT TCAGTGGAGA AACCATAGAA AATAGTACA

AAA

AAA

FIG. 6A(104)



09726552, 1244702

117/223

AAA

AAA

AGTGAAGGAA TAAATTAA ATGACCCATA ATTGTACCAT ACATTCTGAT TTTTAAACG
CTGAACAAAT TAGCCTTGGG TAAGTACCAG GAATAGAGTG CAGCATTGAA AGTTAAAGTT
TGGGGAAGGA TAGCTGACTT AAGAAATTAT CTAGTTAGAC ATTTTGTGGA TGGGGTAATT
TTGCAGATGA CATTAGTGAG AGAAAGGACT TGCCACTCTC ACACAGCTAG TAGGGGTGTG
GGAGGATATT GGAACCAAGT TTCAAGTCTT CAGTGAAGAA TCAAGGGAGA AGTTCTAAAA
CCTAACAAATA TCCCTCTGGA TGGACATTTA TTTTATTACT ACAATAAGCC ACACGGTGAG
TCATAAGGAG CATTTCATTG TTCTAATATG TCTCTACTGT ATTTAGAATC TGATAAAGCC
CTATTAGAAT TCATCTCTTT AAGAATAAAA GAAGCTGAGG AACTAAAGAG AGGGTTGGAA
TAATCCACTA ATTATATCCG TTAAGCTTCA GTTACGCTAA TAAGGAATAT CACATGACTG
TGGTGTGTGC TTGTTCTGAA CAGTAAAGTA CATGAGGAAA GATAAGATTC AGGGCTGAAA
TGTCCTTCAG CATATGTAGG TAGTGGTGAT GAAAGTCATT AAAAGAAAAA TTGATTGAGG

BBB

BBB

FIG. 6A(105)



09726552 - 122705

118/223

BBB

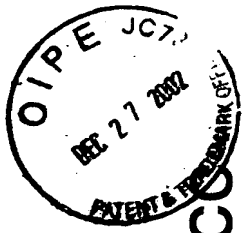
BBB

TATTTTAGTA AACAAAAGAA CTCACCACTT ACCCATCAGG AAGTGTATTG TTAATGCAGT
GCTGTTCAGC CTTCTGGAAG AAAAGGTTTC TTCAATGCTTC TCTCTTTAGC CTAATTCTTA
TCCTGTCACT TTTCAGGCAA AATTAAAAA AAAAAAAGAT TGAAAACGAT GCTCCTATT
TATTGCTTC AAAAGAAACA GGCTGTTGCA TTGTGCTTGG AACAGTTTAC TCTTGGCCTT
GATGTAAGTG TGAAGGAAG CCCATGTAAT TGA CTAGCA GTATCTGAAG AAGCAGGAAA
TACAGTGTTA AGAAAATGAA CAGGCATGAA AACCATGGCT ATTTGATAAA AGTAAATAAT
TTCTGCAGTT CACATGTTCT CAGCATATTT TCTTTGATAC TGACTTGCTT AATATGACAA
TAGCAGAACC ATGGTAGCTT GTAGGCATTA CTTTCTTTT AATTCTTTT ACATTTTGAA
TTTACCAGCA CTCACATTG TATTACTTTT GGGTTATACT GAGGATCTAT AACTTATAGA
TCAAATACCT GACATATATA TGCATTCTCT GAAGTCTTAG GGCAGAACTA GAACATTCTT
GTGAACATCA GTATAAGATA TTAAAATGGA AGTTTTCCT AAGACTGAAG ACAATAAAA

CCC

CCC

FIG. 6A(106)



0072955H . 42E702

119/223

CCC

CCC

TATCATAGTC TGAAATGAAT GCCAGCACAC CATACAGGAT TTAAATATCT ATACATATAT
ATGTGTGTGT ATTATATATA TTTAATATAT ATCTGTGTGG GATAGGAAGA GGTAGGGGGA
AATCAGTTT ACAATTATTA AGTATTTTTCAC CCTTGACAAG AGTATATATA TTGGAAATCA
GTTGGAGAGT ATTTCAAAG ATAAATGTTA GTGTGCTATG AATGAATCCA CCCCTACCAC
CACTGAGGCA GGGTAGGAGA GGCCGTGTGCT CCTCAAGCAT AGTTGAAAAA GGACCTCAAC
AAGACCACTT CAAGAGTCTA ATGTGTGGAG ACTGTTGCTT AGGAGACCT TATGGTCTAG
CTTCTGACTC ACAGCTAAGT CAGGGAGACA GGTGGGCTGC TCTGATCGTG GAGTCCAAAA
GATGGCCTGC ACTGAAAAGC CTCATGAGTG TTGACTTAGG GCTAGTCTAA GAGGTCCCCTG
GAAGAAGAAA CACTCAGTAG GAGAGAAGCT GGAGGTACCT TCAGTGCTGA ATTGAACTA
GATTCATTCC CCCGTGGAGC AAATTACATA GGAAAGATGC CCAGTGATGG AGAGTGGGGG
TGTCTCTAAC AATTACCCAC CCACTGCCCC CACCCTAAGA AAAAGAAAAT CACATACAAC

DDD

DDD

FIG. 6A(107)



0972555H 122702

121/223

EEE

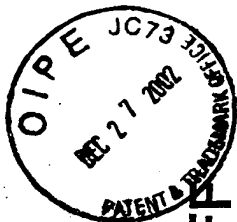
EEE

AAGTACTGAA TTATGGTATT CATTATTCA AATGACAAGC TGGATTTTTT TTTCCTTCGA
ATTTCACAAA TTAATTTTCC TTGGAACCTT TTGGTTTGGG CTTTAAGAGT TTAGGCTTTC
ATCACAAAGA GAGCACAGCC TTGAAGATTA AAGTGTGTGG CTCTTCTCAA GATGTTCTTA
GTCCAGCAAA GGATTCATG CATATTGGG CTTCCTTCTG TCTCATAACC TGTATTTCTT
GATATTCTAT TTATATTCTG TAAGATTTT TTTTAAAGG AAAAATTCCT CCATGGTTGA
AGGACATGTC AAAAATAGAG GATACAGTTT TATATCAAAG GAAGTTTCAT GATATGACTG
TAGAAGCTCA TTGACTTAA GACACATCAT TTCCCTCATGG AAGTGTTAAA CAGATCTGTA
CAATAAGGTT GGCAATCTTT GTGTAAAACA GTTTTTTTC TCCTGCTCTA AAGAAAGTGT
ATATTTCAA ATGTGAATGT CAGCAGTCAG AAAATAGTAT TTTTTTAACT TCGTTTTTCAA
AGTCCTCAA AACCTGTACC TAATCATGAA TTTTTTTTCC CACAGATTGT TTCTTCTTCT
CCCTCCCAGA AACTTTGAAG TTTTCTTACA TGACACCAGG ACCATGTCT TTTTTTAATT

FFF

FFF

FIG. 6A(109)



09726502 . 122702

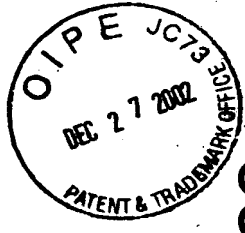
122/223

FFF FFF

ACACAGAAAT GAAAGAAAAA AAGTGTGTTG TATCGTTAAC CAAATATATG AAATCTTTAA
GCTGTATTTT TATTTTAAAC TTTGTTTTGC AAAGAGGCCA TTCCCTTTGG TTAAATAAAT
TGTTATTCAC AGTTTCCTTG TCCTCATATT ATCAAGGGA AAATGTAGA AATTTAAAG
GAAGCTCTAG GCAATGTTTT CATCCCTGAA TCTTTGGAGA GTTATAAAAA CAAACAGATT
ACTGAACCTG TAAGAGAACC AATCGTGAAG TCATTACATC TAAGCATAAG CAAATCTCC
TCTTGGATCA TTAAGTTATA GAAGAAAAGA AAGCCTGCAC TTTGAAATTT AGATAAAGCT
TGGTAACTTG TAAGTCAAAC ACGTAAATTT TTACAATTCA GGAATATCGA TAGCAGTTGA
GTTTAATAGA CTTCTCACAT TCCAATTTA AAGCTTCCTT CTCTGTGCTA ATAGAGATAC
AATAGCAGTA GCGGTTTAAG AAGAATGAAT CAACAATTTA AAACATAAAT GTGTTTTTTA
TTCATCTCCC TTATTACACAT ATATTGTGTT TGTTTTGAGA AGGAGTTCTG CTCTGTCGCC
CAGGCAGGAG TGCTGTGGCA CGATCTCAGC TCACCGCAAC CTCTGCCCTCC CGGTTCAAG

GGG GGG

FIG. 6A(110)



09720552 . 122702

123/223

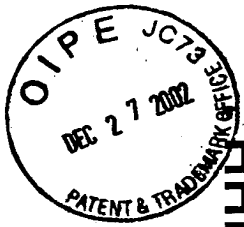
GGG _____ GGG

CGATTCTCTT GCCTCAGCCT CCTGAGTAGC TCGGATTACA GCGGTGCGCC AGCAACCCCG
GCTAATTTT GTATTTTAG TAGAGACAGG GTTTCACCAC GTTGACATC TTGGTCTCGA
ACCCCTGATC TCAAGTGATC AGCCCGCCTC GGCTCCCAA AGTGCTGGGA TTACAGGCGT
GAGCCATCAC TTCTGGCCCT TATTCGCATA CAATTAAAA ATCATCACAG AAGTTTGAA
AGAAGGAGG GGCAGAAAAT TACCTACTTT TCCTCTCCCC AGCGATCTCC TTCAAATCTG
TGCCTTTTCC TCAGGCCCCAG GCCTCAATT ACTGAGCAGT CACACCTCAC AGAGGGAGGT
CTGGGCAATC CACTCTTGGT CACAGGAAAG CCATTGACCC TCCCACCTCC TCTCCTCCAC
CTTGTTCTCA ACTCTTGACT TTGGGCTTTG TTTCTGTTCA AGTCCTAGAA CTGGTTTCTT
TTATCAGGTT AAGTGATTAG TTCTCTTTCC CTCTAGTTGC TCTCACTCCC TGACTCTTGC
CTTCTGTAC AACTGGAGAC AACTCTTTCA AAACCAGCTC CAAGCCCCAG ACTTCTCTCT
GGGCTTAGT TCGTAAGCA GTGCCCTAC TGAGTGAGCC TAGATCAGAC AGAAACATAG

HHH

HHH

FIG. 6A(111)



00720558 . 122702

124/223

HHH

HHH

CTGTTGGCAA GGATTAGGT GAATTCCCTT CCATTGTTTT TCTAATACCT TTTTTTTTTT
TTTGTAATA TAACCATGCA CCTACACACA TATTGAATA TCCTGCCCTT TTATTAAAA
TGACATGATA GGTCGGGAG TGTGGCTCA TGCCTGTAAT CCCAGCACTT TGGAGGCCG
AGGTGGCAG ATCACCTGAG GTCAGGAGT CGAGACCAGC CTGGCCAACA TGGTAAACT
CCATCTCTAC TAAAAATCAA AAATTAGCCG GGCATGGTG CAGGCTCCCA GCTACTCAGG
AGGCTGAGAT GTGAAAATCG CTTGAACCCG GGAGGTAGAG GTGCAAGTGA GCTGAGATCT
TGCCATTGCA TTCCAGCCTG GGCAATAAGA GCGAACTCC ATCTCAAAA AAAAAAAAAA
AAAAAGACAG GATAACATT CTAGATAGTC TCTATAATGG TCATGATTAA GACAATAAAA
TAGTCTGAAA TTGTCAATAT ATATTAATAA TAATTATT GGCCATTCTG CCAAGTAGCA
GACACCTGTC ATTCTGCCCA CTCAGCACCT CTCTTCTTT TAGGGAATG CTACCCACTC
TTTGCAATGG TTCTGGATGG AACTGTTGAT CACAGTGTT TCACTCCCA TTTGCTCTCA

III

III

FIG. 6A(112)



097P055R J122702

125/223

III

III

CCAGAGGTAG ACAGAAGACC CAAGCCAGGC CAGTTACACA CAATCTTCAG ATAATTACCG
TATTGATCAC AGTATCACCC CACTCAAGGC TTGGTTGGAG ATGAGCAGAA GAGACTAAAG
CTGGGTCATT TTAATTAAACA CCTGTACCCC AAAGAAAGAC TGTCAATGAG GCTTTTATAC
CGACACTCCT GGTTTCCATT CTTCCTGATG CCATTCAATT GACGAACAC CCAATCTTTC
CAACAGTGTC TTTGGAAGAA AGATAGTCAG AAAAGAAGAT AGAGTTGTTT TCTGTTCTTT
GCAACCAAGG AACTCTAAAT GATAGACTTG TTGCTAGGCA CTTTGTTTAT TTTTATTATC
TTGAATACTT CTGTGATATA CTTCCTTTGTG CATGCCCTGTT TGTACGGATG TAGCTTTTTA
TATATTTTAT ATAATTCTC AGAAGTGGAA TTAAGTAAGT AAAAGGTATG AACATTTTCT
GATTCTTAAT ATAAATTGTG CAAATGCTTT TTAAGAAGAT TATACCAGTT TACATTTTGT
GTTATATATA ACAGAAAGTA CTAAGTAAAA ATATTACAAA AATTGCTCTCT CTGTTACAGA
GGACTTGTA TAGATGATA AGTACTTGAA ATAGGAACAT AGAGCATTTT CAGTTTAAAA

JJJ

JJJ

FIG. 6A(113)

JJJ

JJJ

TAATTTCATT GGGTTATTTA CGGAATCCCTT AGAATTATGG CCAGACATTT ATAGATGATC
TGTACCAAAC CTAGTTGGTT ACATAAATTG CTTATTCAAC TGGCTTAAAT CTATAATAGA
AAGATGACAC TTA CTGAATG TTTAATATAC ACTTTGTCAG GGGCTTTGTA TTATTCTATG
ACATCTTCAA AATGACCCCTA CTTTCCTATT TTATAAGTAA GGACAGGAAG GCTTCAAGAA
CATGACTAAT TTTCCCAAGG GCTGTACCAA AGCCAGAACC CAAATCTATA AGGCTTTTAA
ACCTGCATTC TAAAACTGCA TCTCGGCCAT CTTATTCCCTA CAGAACTTAA GGTAGAAAG
CCAGATTGGA GTCCCAATTT CACCACCTAG TAACCAGACA AACTTGAGGA ATTCACTCAA
CGTCTTTGAA TCTCCATTTC CTAATCTTTA AAACTAAAAC AATAATACTG GCCCTACCTA
TTTCCTAAA TTTTCGTGAG CACATAGAGC TAGTGTGGTA GAGTGTGTA CAGATGTCAA
GTGTTAGCGT GAATTACTTA GATCCCTGAA CACCATGGAT GAATGTGTCT GACTGCTATT
AGAGGTCATA AAGAATATTG GGGCCAGGTA CATGGCTTA TTCCATAAAT GCCAGCACTT

KKK

KKK

FIG. 6A(114)

126/223

09728552 122702



KKK

KKK

TGGGAGCCTG AGACAGGAGG ATCACTCGAG GCCACAATT CAAGACCGGC CTGGGCAACA
 TAGTGAGACC CCTTCTCTAC AAAAAAAAAA AAGCAGCCAC GTGTAGTGGC ACACACCTGT
 AGTCCCACAT ACTCAGGAGG GTGATTTGGG AGGATAACTT TAGTCCAGGA GTTCAAGGT
 GCAGTGAGCT GTGATTGCAC CACTGTACTC TAACCTGGAC AGCAGAGTGA GACCCTGTCT
 CTAAAAAAAA AGAAAAAAAA AATAATAATA ATAAAGAATA ATGGCCTTG GGATACCCAC
 TCCTCTCTTT CTGCTCTGAG TTGTGAAGCA GTTGAGTTAC ATATGCATGT CCAATGGATG
 AGGTTGAAAA TATCAACTGG ATTGGAATGT GGCTTACTTG CGTGGCCACA ATGAGCTTCG
 TAACACTTCC TGACAGGGTG AGAAGACAAA CTTCTCTACC CAGTCACTGG CAGAGCTGGA
 CACTCTGTGT CTCTCCCACA GAACAACCTC TTACTGCATG GAGGTGGATG AAAAAGTCAA
 CCGAGAACAG GCTACTCCAA AAAGCAGAGC ACCAAAGGCA CCAGCTGGTC AGTCCCCCT
 TCCTAAGTAA ACAATCACGT AATTCAATCG GGACAAAGCC AGAGAGGTGG TGTGGAGAAA

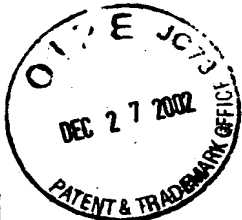
LLL

LLL

FIG. 6A(115)

127/223

09728552 . 122702



128/223

LLL _____ LLL

GAGAGGCAG TTTCCCTCCA AGTTTTTCCT GGAATTCCTT ATGGGAATAT GAGGTTAGG
GGAATAAGAC TTCCCTTTAA CAGTGAAGAA TCCCCAGCTC TATTGTAAT AGGAAATCGC
TTACAAGGAT CATGGGAGT ATTTCCCTCAG CTCGTTCTGC CTCCTACTTG GCTGAGTGGA
ATGGAACCAT CTGTGGCTGC TGCATATGAT ATTGTCAACT TTGTCATTCC ACACCCACTC
CTTGACGCC TACCATGTGG TCATAAGACT CCCTTTAAAG TGTTCCCTTA AAAAACAAAA
TGTGTTTTGT TTCTATAAAA TACAGCTCAA TGTCAGAACC CTTGTCTTGT TTGCTCTCTG
ATGTAACCCT TTCACAATGT TTGGGCAGCT TATTCTCTCT ATTTCCCTGT AGGGTCCCAT
CCAGGCCAAA GTGAGTGCCA GCCTCATTG GGCAGCACAT GCCCTGTGGA AGGCGAGGAA
GAGACGAAAG CTAATGTAA CTTTGTGATT AGCTGTGATG GATGCCCTGGT CCTGTCAATA
GCGCTCAATA AAGCCAGAAG GCCAAGCGTT CGCTTCTGCA TACTGATTGC TGAGTCAGAT
TTCTCAGTGC AGAAGGCCTT TCTAGGCAGT CAATTTTGA ATATTAGTCT TGGTTCTTAA

MMM

FIG. 6A(116)

MMM



09728552.129/223

129/223

MMM

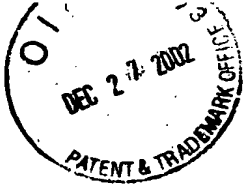
MMM

GTGGTTAAAA TCCCTAGCTG GTCTTTAATC TGAGCCTGGA GAATTAGTT AGGGCTGACA
TTCTGCTGTG ATATTTTTC CCTCAATATA TATGTCTTTC CTCCATCTCT TAGATCCCTG
AATCATAGAG ATATATATGT TATATAATCA ACTGTCTCCA GTCTCTAAGA GTGATAAGTA
CACATTGTGT CAGGTGAGG GGACAGGAGA ACTTTCAAAA GCCTTCTCTG CCCCCTTTTC
CTTCTACTG CCTCCACTA AGTCCAGCCA CTTATTATTC AGCTGACACT ATCATCATGA
CCATGAGTCT TTTGGGGCTA CCTGGTTTCG GATCCTTTTG GAGTTTGT GCTTAACTCT
GTCTTCAGTC CTATGGAGCT GCTTTTTCAT TAAGTTTCTA TTTTGGCTAA AGTTGGCCAG
AATCTCCTTG TAACCAAAGA ACAAATAAAA TACCAGCTTG CAATGTTCTA TGTGCTTCC
ACCAAACTTA TGCAGCACTT CCTATCTAAT CCACCTACTA GTCTTTTTTT TTTTATTTT
TTTGGAGACG GAGTCTCGCT CTGTTGCTCA GGATGGAGTG CAATGGTGCA ATCTCGGCTC
ACTGCAACCT CTGCCTCCCG GGTTCAGCA ATTCCCCGC CTCAGCCTCC TGAGTAGCTG

NNN

NNN

FIG. 6A(117)



0975552.122702

130/223

NNN

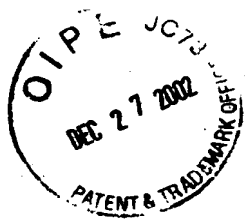
NNN

GGACTACAGG TGCATGCCAC CACGTCCGGC TAATTTTGT ATTTTAGGAG AGAGAGGGTT
TCACCATGTT GCCCAGGCTG GTCACGAACT CCTGAGCTCA GGCAATCCGC CCTCCTCGGG
CTCCCAAAGT GCTGGGATTA CAGGAGTGAG CCACCTCACC TGGCCCCGAC CTA TAGTCT
TTAGTGTTG CTTCCTTCTA TTGGGTAATT GTCTGTTTAT ATGCATGTCT TGTTCCTCA
AATAAAATGT GGTCTTCTCA AGGTATTGG CCCATGTTCT ATCCATCTGT AGATATCACA
GCACCTAGCA GTGTCCTTCA CAGAGGAAGT ACACAACTGG CATTATTGAT TCATTGCTCC
ATTTTTCCT TCTTTATCCC CAGCATTCT CAATAATTTC AACATCTCC ATTGGAGTAC
CGGAGAAAGC AGGTAGCTTT ACTTGCAGCT ATGTTTCTAT CCCCATAGTA ACTAAAAGAG
GACCCAGAGA AACATGTTTA AATGCTGTCC TGTATCAGG ACCTCAGCCT TCTGATGCTC
CGTGGCTTG GGTAAATGC TTGATCATTT CCTCCCCAAC CTACACTGTG TACCTATGCT
AGTCTCTTCA TGAGGACTAA GCCCATAGT AAAGGGCTA GATAAATAGA AAATCATTTT

000

FIG. 6A(18)

000



09726552 . 122702

131/223

000_____000

ATGTAATTAT AAGAATGAGA ATACTGAGTA TTA CTGGTGT TTGTTAGGA TAAGCACATC
TTTATTGTGTA TGAGAAAAG AAAAGAGAG TGAAAAATAT ATTAACGTGC ATATAGTTCA
GGACCATGGA TTGCAAGTGA CAGAACTCA ATTCAAACCA ACGTAAGTCA AAAGGAAAT
ATATTGGCTC ATGTAACCTT CTCACAGAGA GGCAGGATG GAAGGGGCTT TGGGAACAAG
AGAAATGTTC TCAAATTCTA GGAATACTAG GATTAGTCCA GGATGGGTCA CCTTCCTGTC
CCTGAGGTG TGGTAGCGAT GGTAGAGTCT TATGGGAGGA AAGAGTGCAT GTTAGGATGA

PPP_____PPP

FIG. 6A(119)

PIPE
DEC 27 2002
PATENT OFFICE

09728552 . 122702

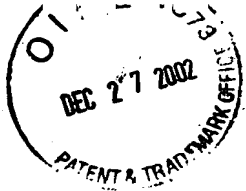
132/223

PPP _____ PPP

AGGTAGGGCT AAGCAAACAA GGGCAAGGC CACTATATCA TGCTAAAAAT GGTTTTTTTT
GATGCTTCC TTAATTTCAC AAATGCTTCC AACAAAGTAG CACACAGGAA AAAGAACATA
GGGACTCTAC TGGTGGGTGC TTTTATCTTA AGCCTTGAC TTGCTTTTCA CAGCTTACTC
ACTGCTTGTA CCTGAGGCCA TATGCCCTGT AAAAGCTTCT GCAGGGTTTC TACTAAGCTG
GGTTCCTTAT ATGGCTCTCT CCCATTCTG TTGCCCTCACT CTAGTGATCT TTCTCTTTTC

QQQ _____ QQQ

FIG. 6A(120)



09724552.122702

133/223

QQQ

QQQ

CTCACCTCTG GGACTGGTGG CTGTTTGAT GGACTGCCCTT AGCTTTGCTT TGGGTTTTTT
CCTGGGGACA ATGCTTCAG ATTATCCTAG ACCAAATAAA CTACAGCCAC TGGGCCAGGC
TCTTCCTCCT CCAACTGGAC CATGTTCCCA GGGCTCTTCA CCTTAGTTTA GGTCAAGCAT
TCTTGGCAA AGAAGGCCT AGTTAACAAT AGACATTCTA GCAATTGATT CTTTTGACA
TGTTGTAAGA TCTATTACA TTTTGTAATT AAAGCATTC CCTATGGAAA CCAACACGAA
CTAAGCTGCT CCTGGAATGC AGGTGGCCT CCTCAATACA GGATGTTCTA GAGAGCTGTA

RRR

RRR

FIG. 6A(121)



09/28552.122708

134/223

RRR

RRR

TTTGGGCAC TTAACATATC TCCACTACTT AGGCACAGC ACTGAAATTA ACACCACTAA
GTTGTGATG TCCATGTAGT TAGTCTCAGG CAGTGCAGCC TCAGGAGTGG AACTGACCTC
TTATGTGTGT CCAGCCTTTC TTCCCTCAGA AGTCAGCTGT GTTTCTGCT GACTCTCCAT
AGGAACATCA GTCCTGAATC CTCAGACCAC CATCTGGAGT AGTAAGTGCT CCTGACAGTC
CTAGAAGTTG TCTACCGCTG GATCTCCAAA GCGTGTGACA CACCGTGAGA GAGAAATGAG

SSS

SSS

FIG. 6A(122)

135/223

SSS

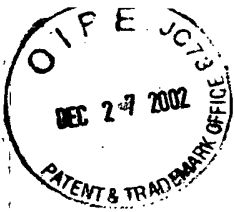
SSS

AAAGCTGGGC TCTTCAGGTA AATCTTGCTT TTTCACAAGC CCCCTAATTT TACTGCATAA
TTATTTTGAA TTCACTGATA ATTTCTACAA TTTTCCCATTA AGTCATCTAC ACACAATACC
CTCTCATGCA ACACTTGGCT TTGCTAATAC ATATCTATTA TGAGAGCTGT GCTTCTTAAG
CGTAAATGTT TTATATGCAC TAAGGCTCTT GGCTTACATA TAAAGGGGT ATTGAGCAAT
GTGATACAGA AGTCTTTTCT CCACAGGTCT CATATGTAA GAATTCATTA GATTGGCTGA
AATAGACTGA TCTGTCCATT TCTCTGCTCA CTTATCATTA GGAAGTCATT AGCTAAGGAA
CAAAAACACTAC AATCTATGTA ATTAGAAGAA CAAGCTGGTT TTGCTCAATA TAAAAATAAG
AAAAGAAAC CATGTGAAAG TCAAAATATT TGTTAATCA GGTCATTGAG AATCTATTA
AAAGTATTG AATCTTTTAT GATGAGAACT ATCTTGACTC AAGTGGACAG TGGTGAGCTT
TTTGGCCGTG GTCCCTACG TAGAAAGGAG GCTTTGTCAT AAAGTCTTAT ATGGTACAGG
TGCCAAGTTA AGTGCCCAAG CTTGCTCTTA AAAGCATACT GGATTTTGT TTAGACTTTT

TTT

TTT

FIG. 6A(123)



09728552.122702

136/223

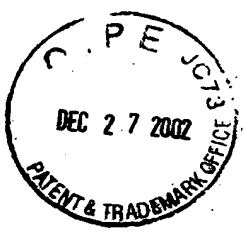
III

III

AGTGAACCTGA AGGGAATAAA CAAATCCCTC TGGGAGAACT TCTCCTCCAT CCTTGGTGAA

GTCAATCTGC CAGAAATTC

FIG. 6A(124)



09728552 . 122702

137/223

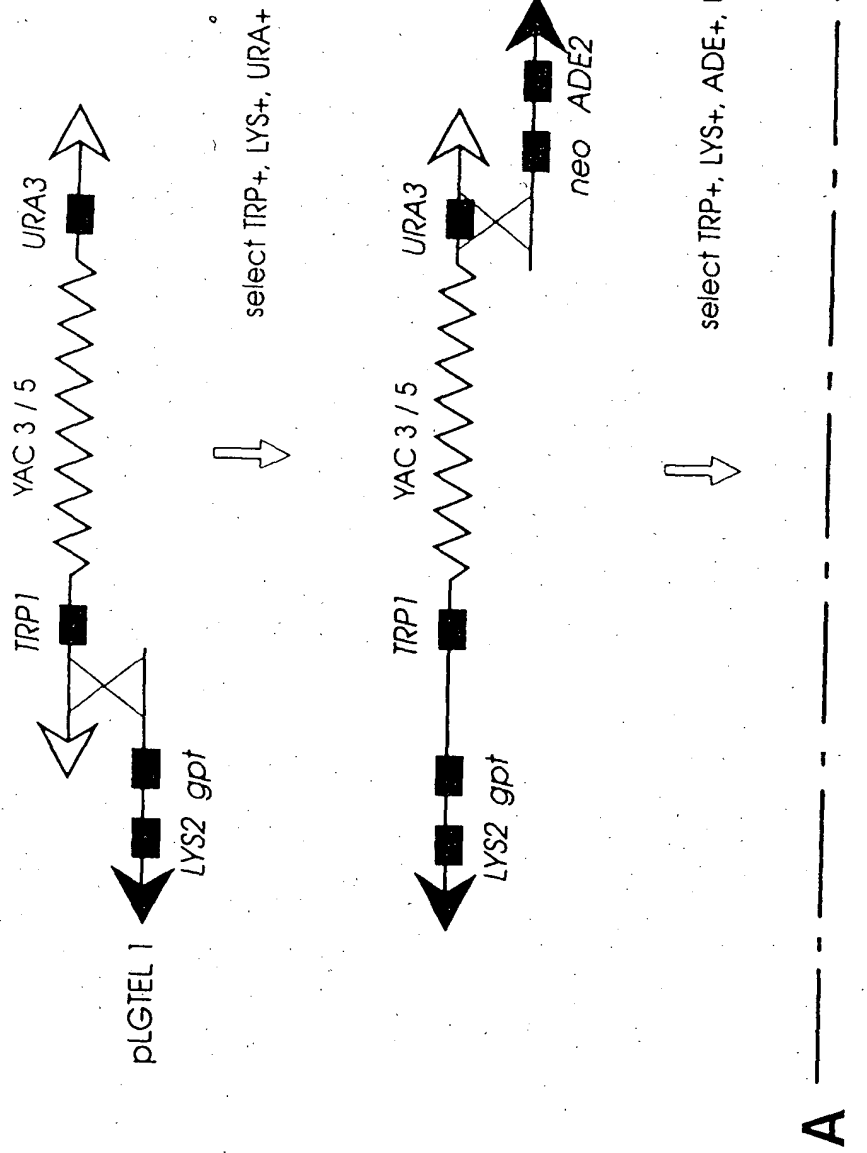
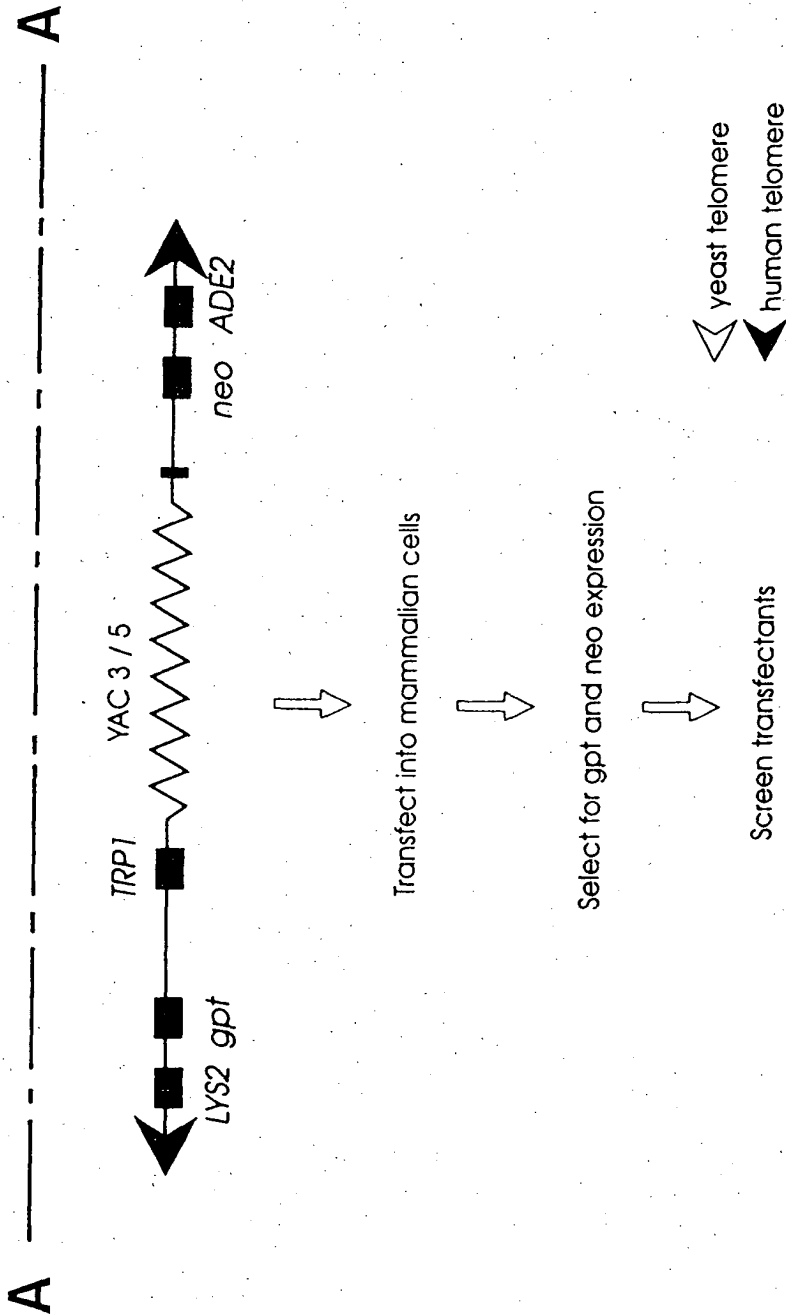


FIG. 7A

138/223

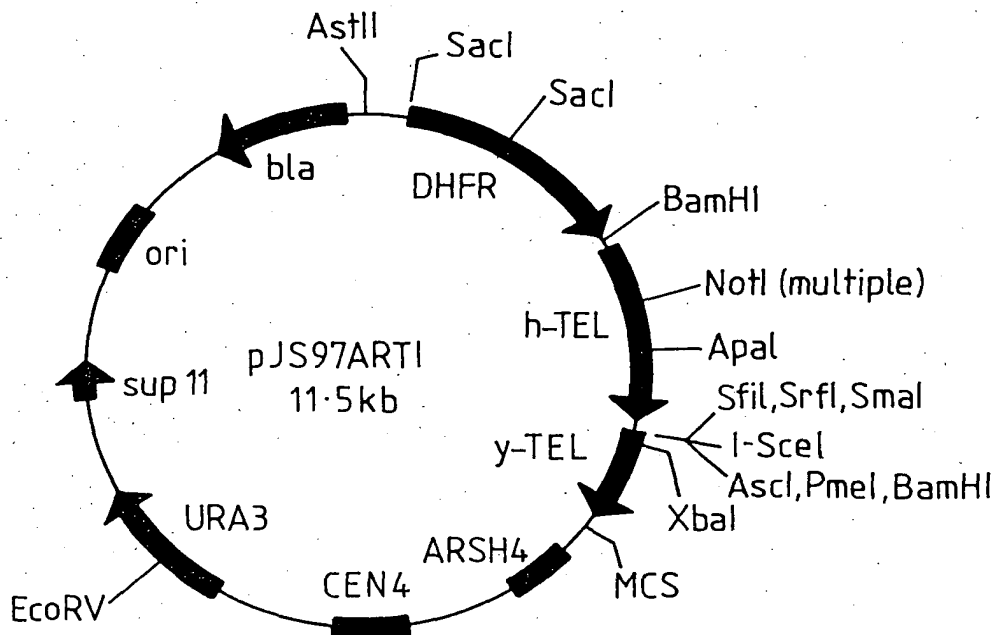


Procedure used to retrofit YAC 3 and YAC 5.

FIG. 7B

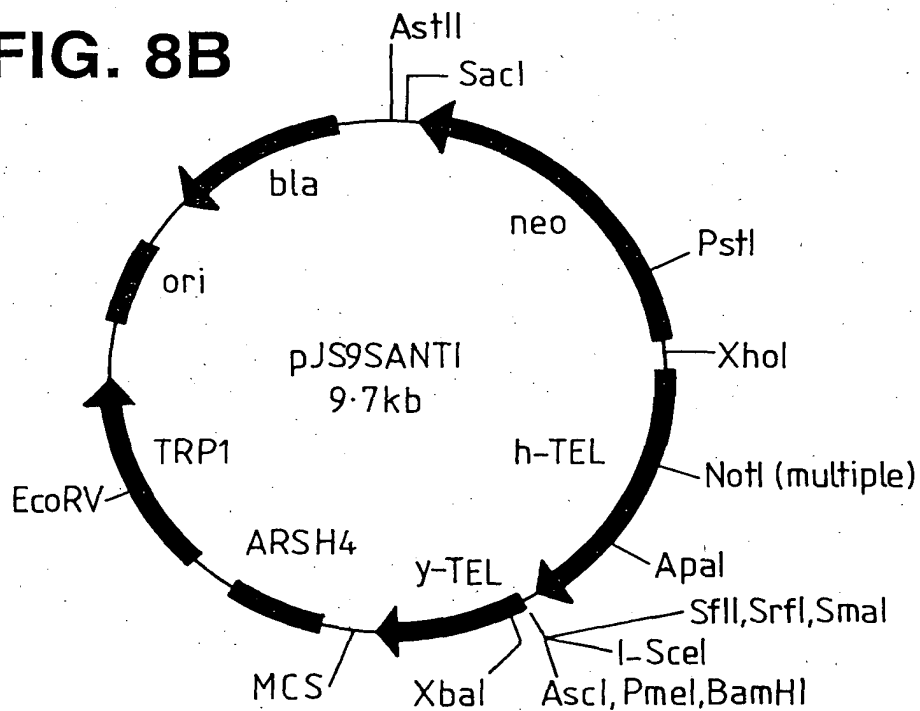
139/223

FIG. 8A



MCS = T7, EcoRI, BglII, NotI, XmaII, SstII, SalI, NruI, NheI, BstBI, ClaI

FIG. 8B



T7, EcoRI, BglII, NotI, XmaII, SstII, SalI, NruI, NheI, BstBI, ClaI

140/223

FIG. 8C

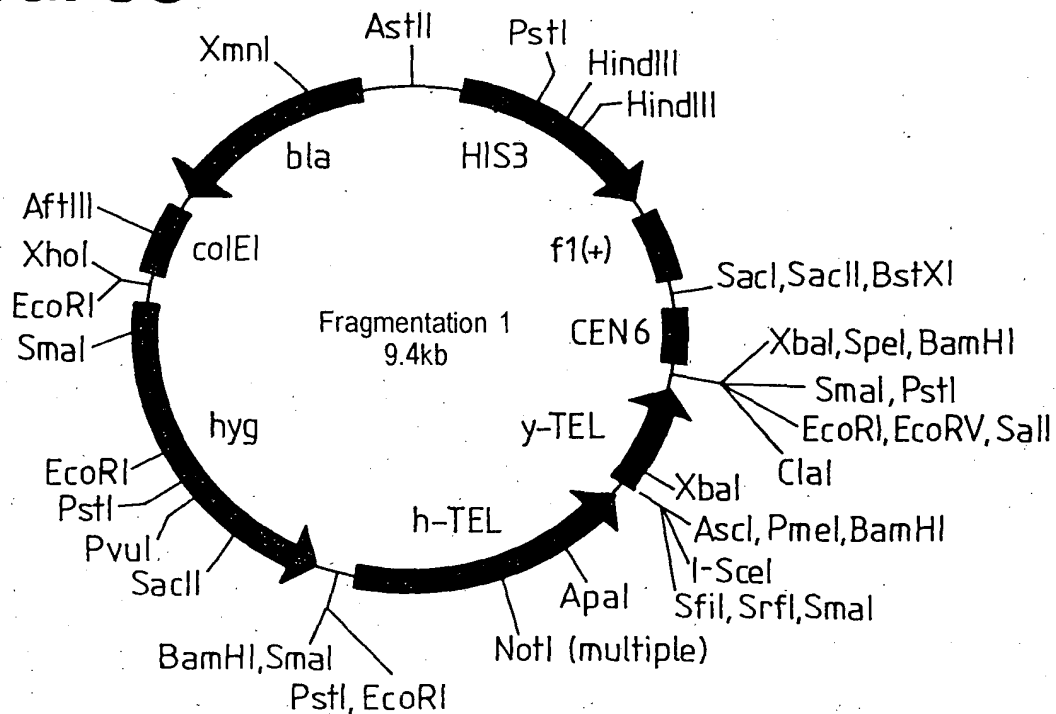
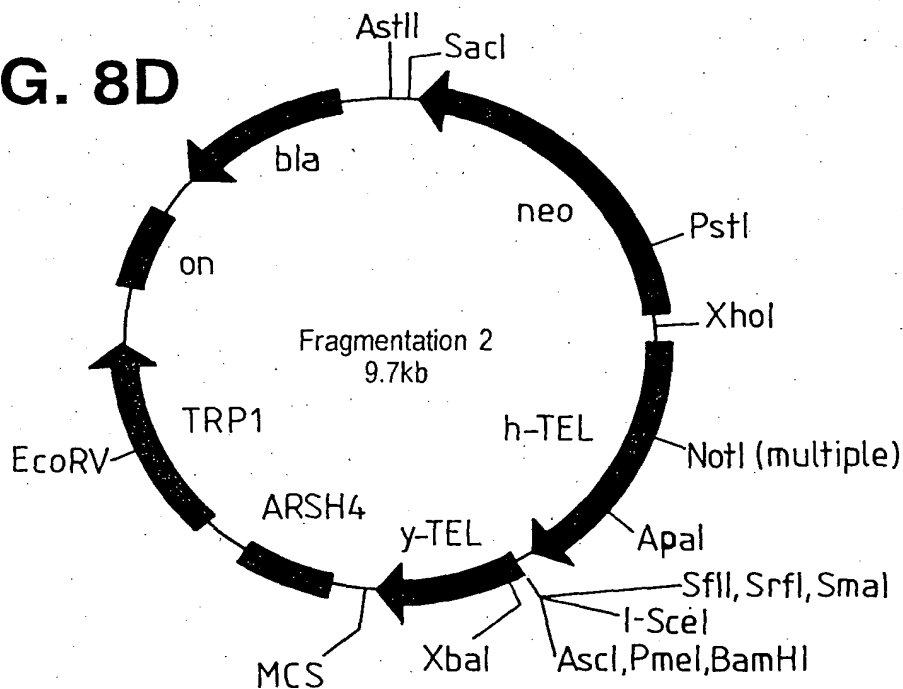


FIG. 8D



T7, EcoRI, BglII, NotI, XmaII, SstII, Sall, NruI, NheI, BstBI, ClaI

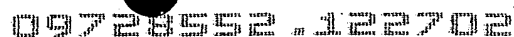
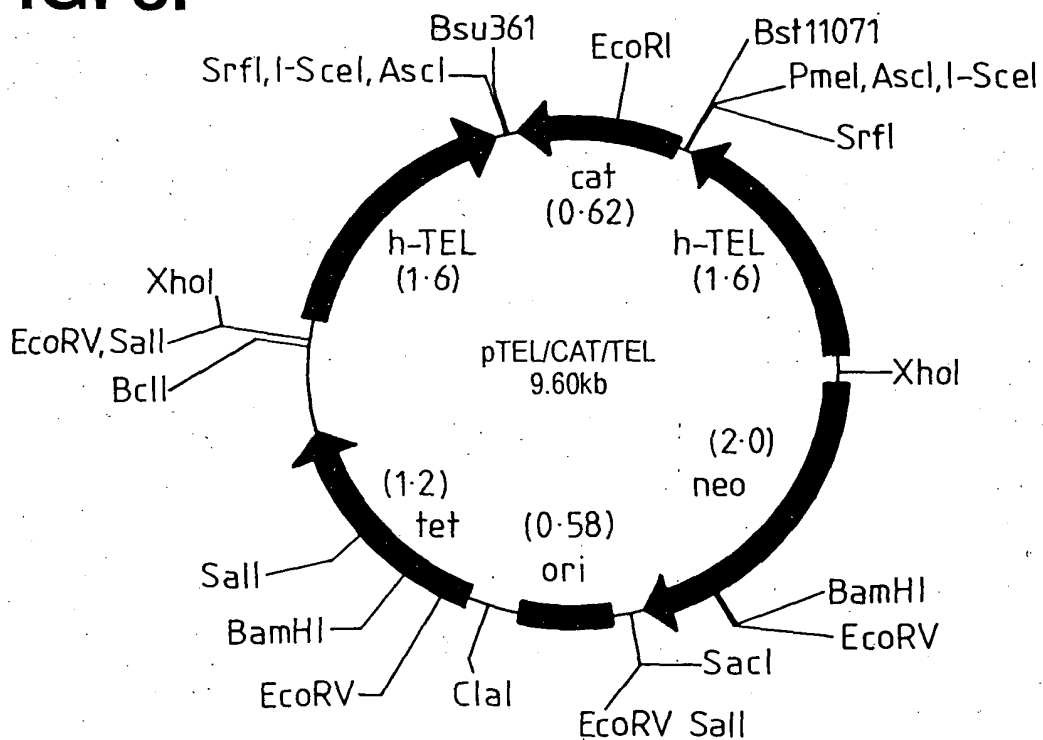


FIG. 8E



142/223

FIG. 8G

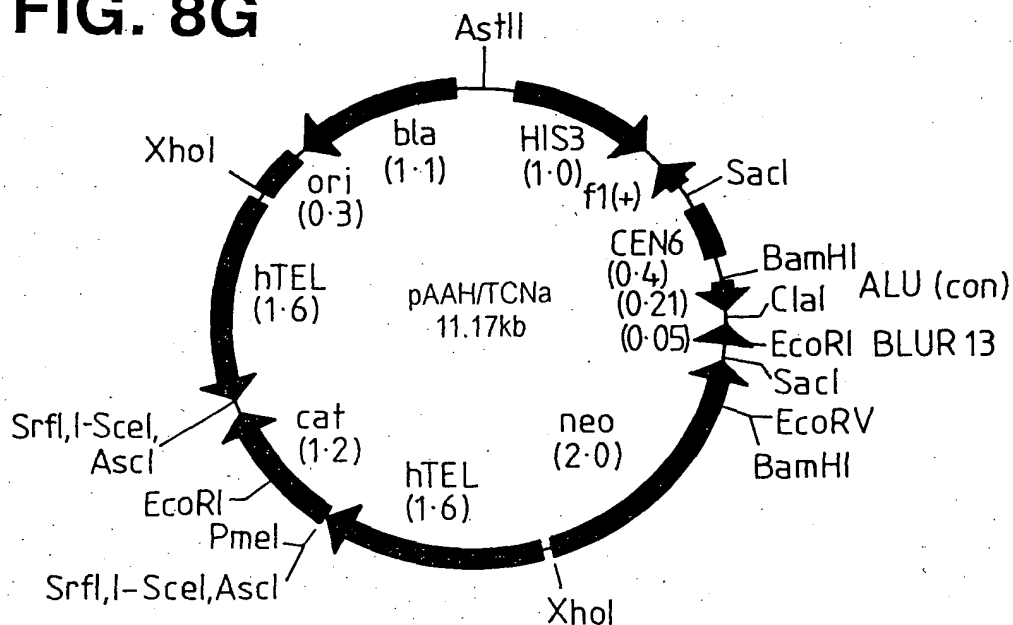
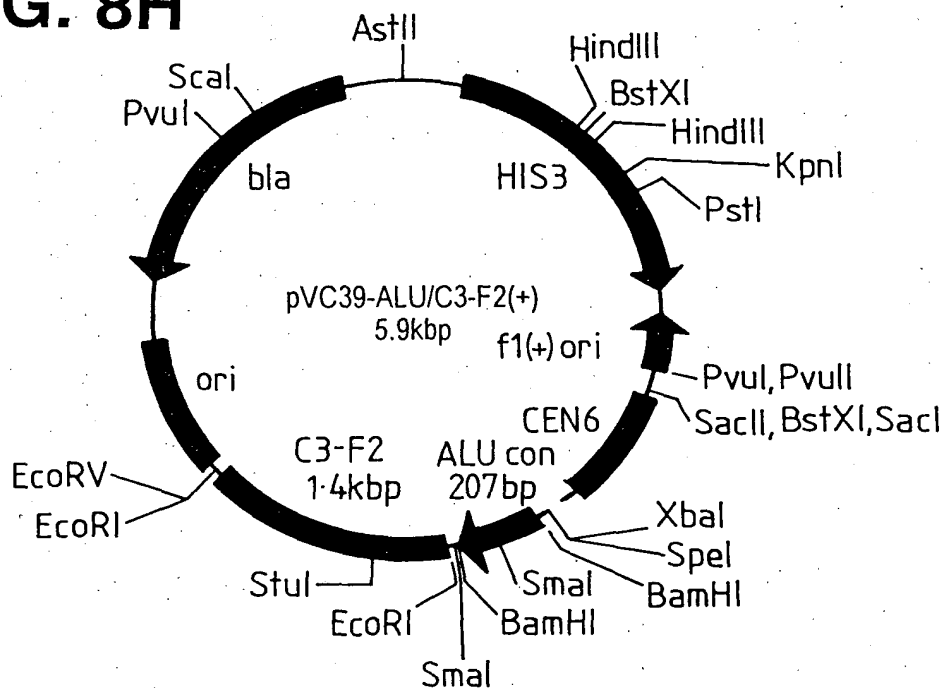


FIG. 8H



143/223

FIG. 8I

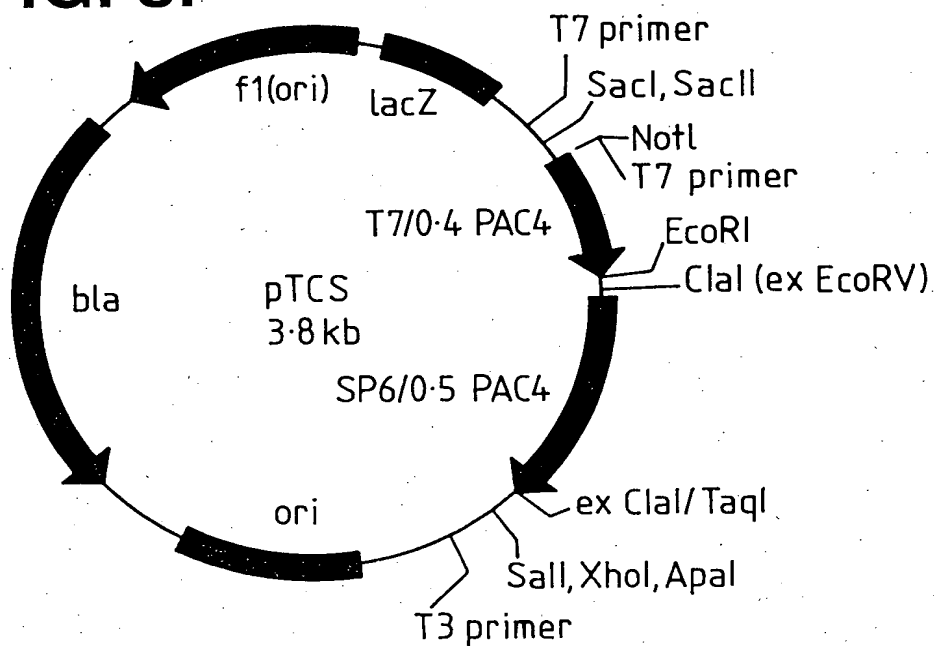
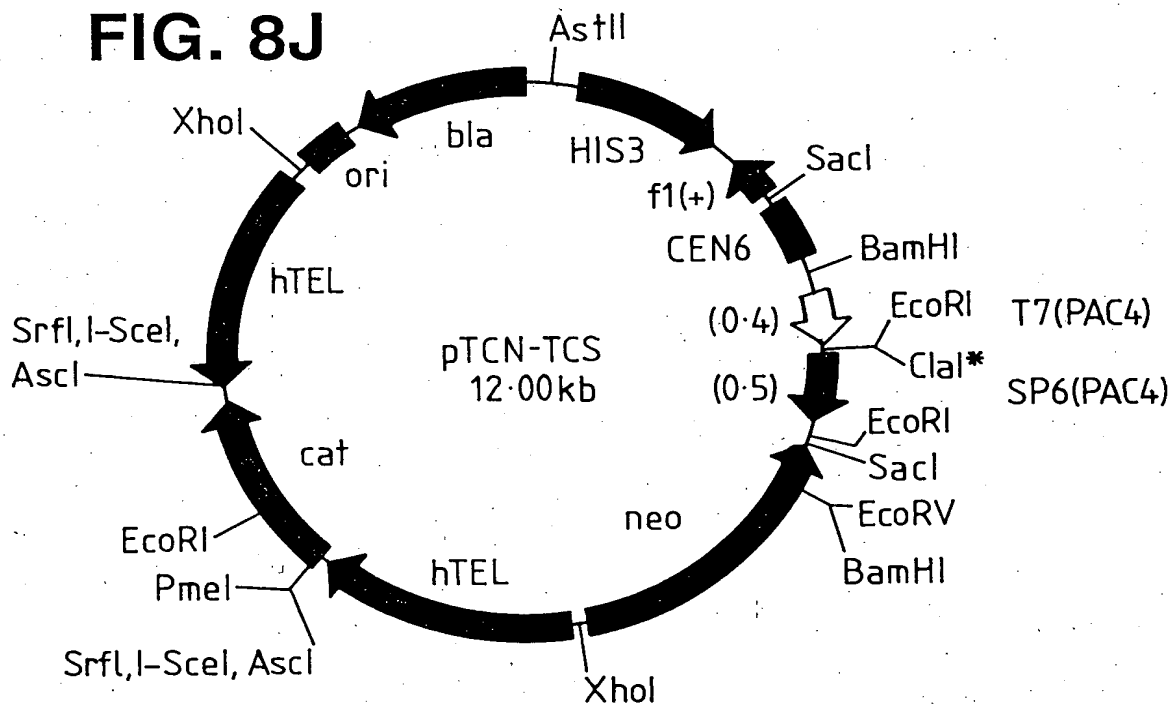


FIG. 8J



144/223

FIG. 9 Circular TAR

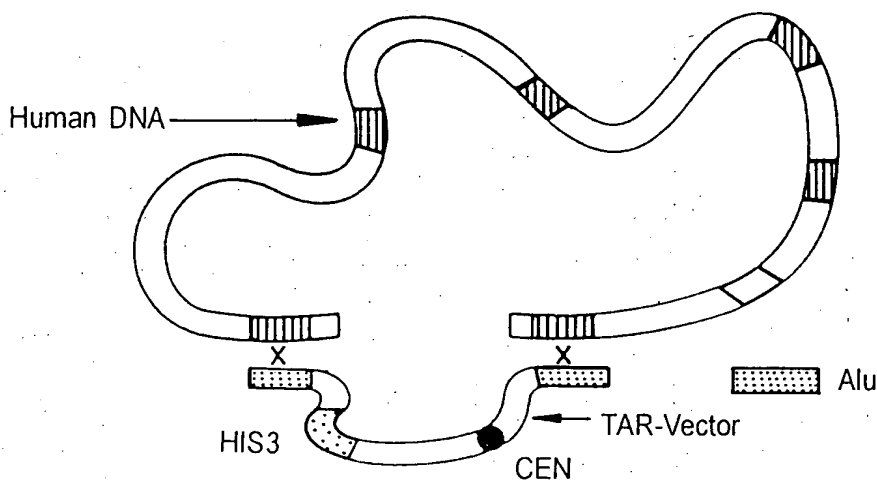
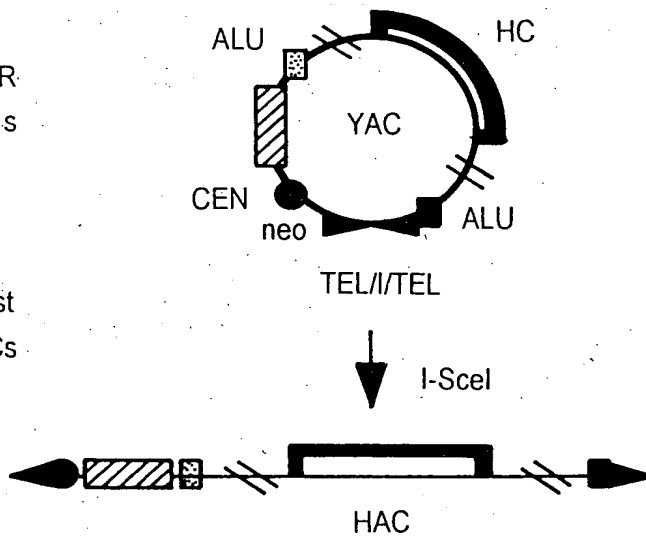
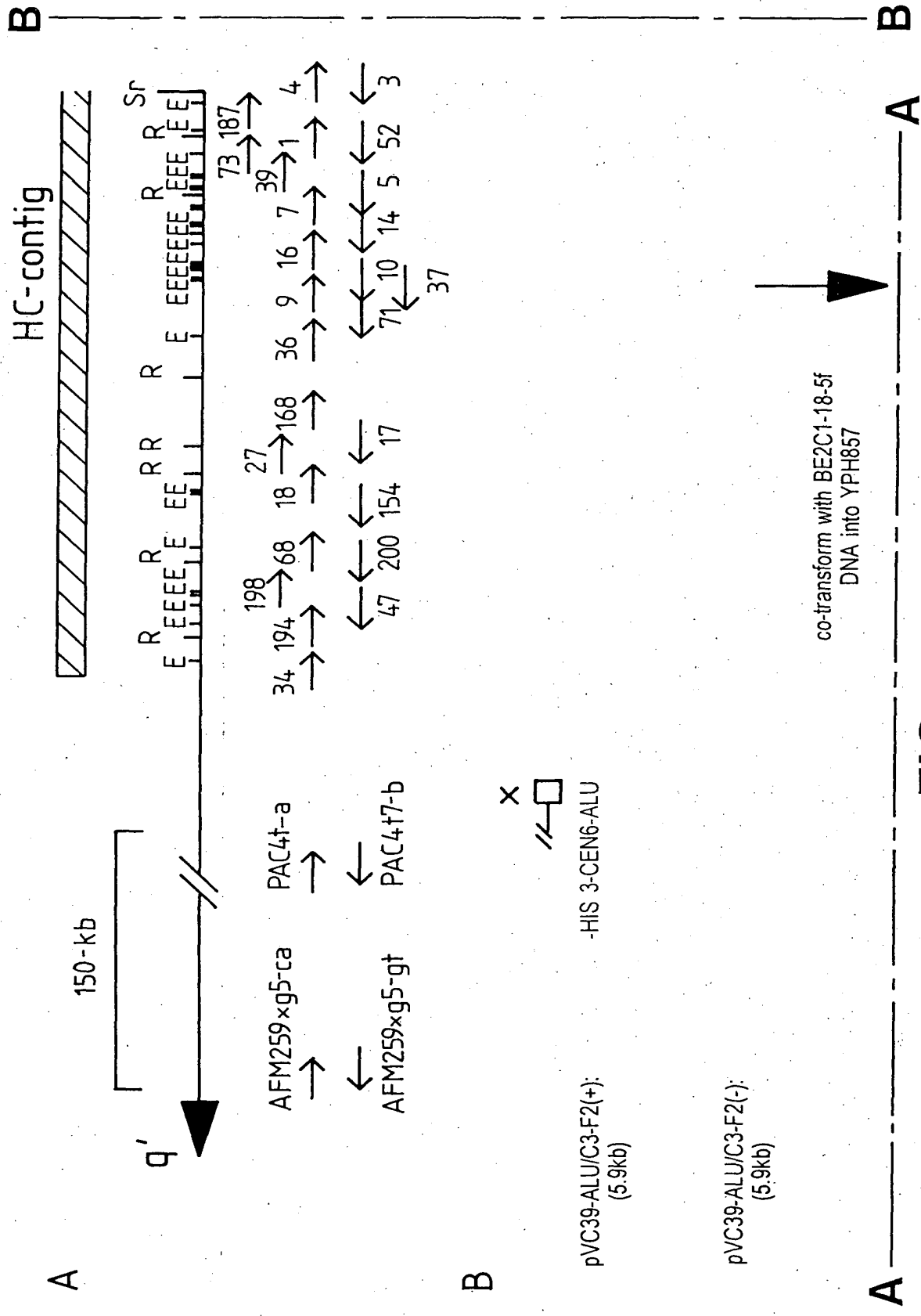


FIG. 10 Shuttle YAC to HAC

1. Circular TAR
to create YACs

2. I-SceI digest
to create HACs





146/223

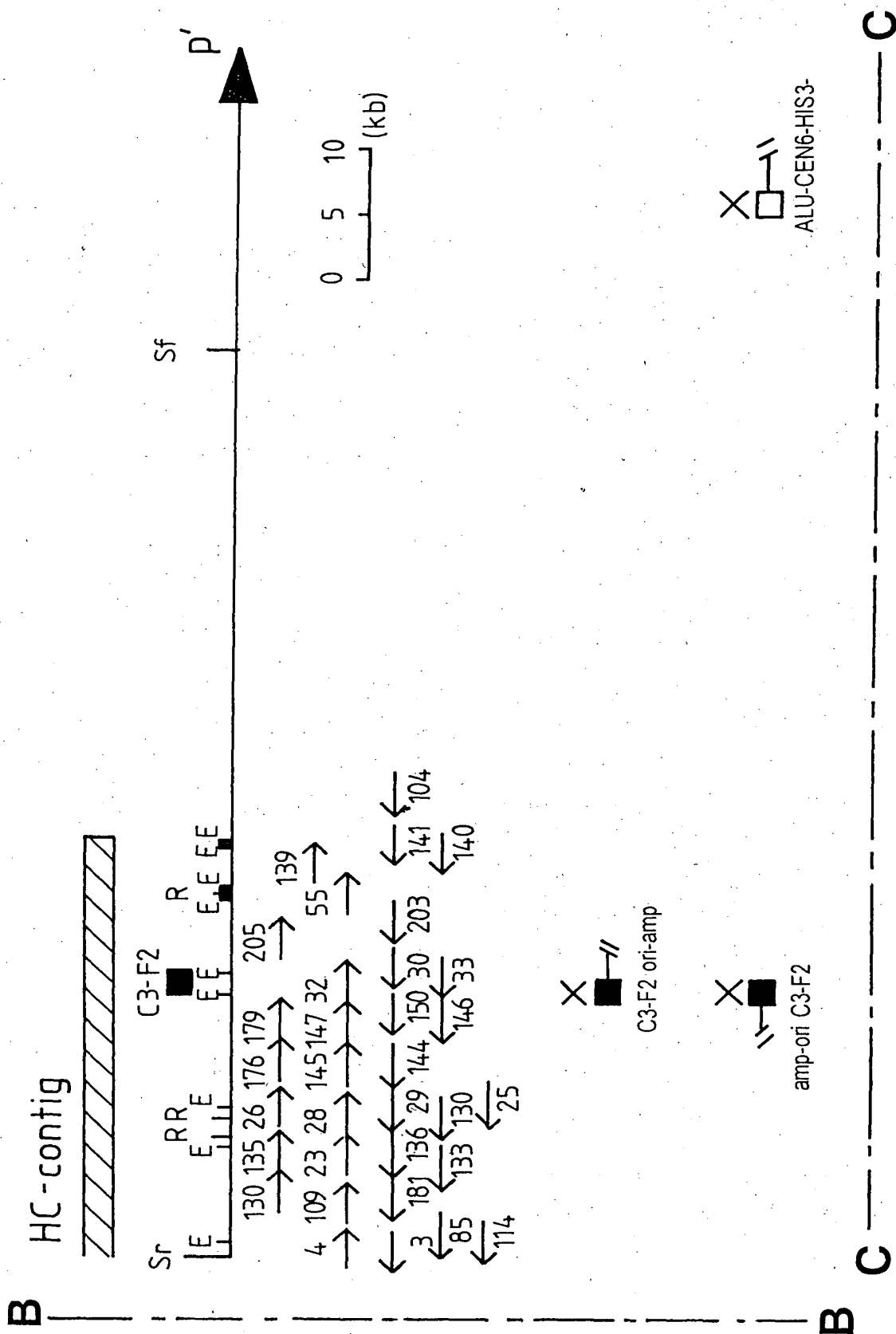


FIG. 11B

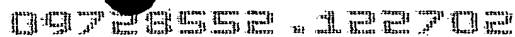
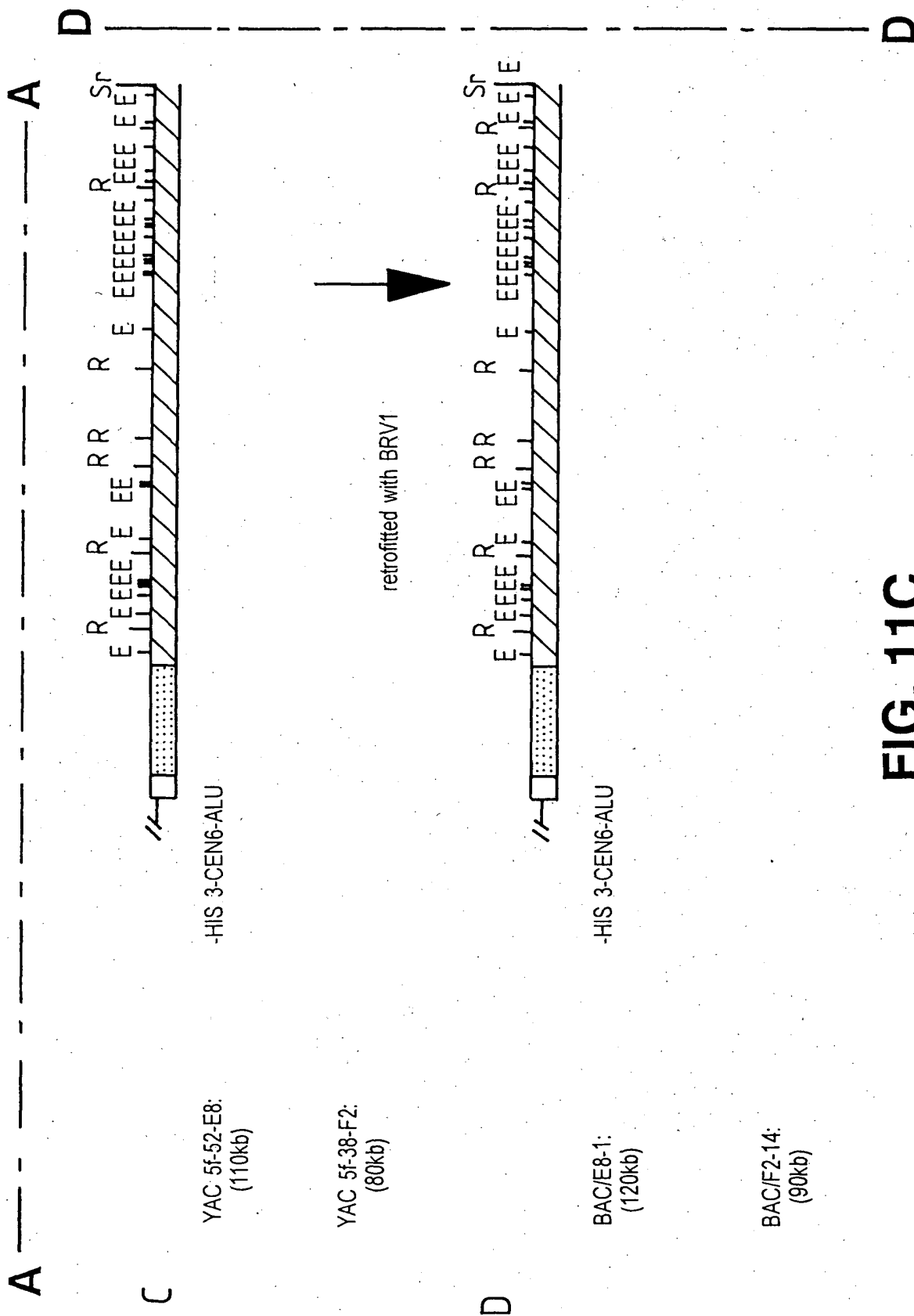


FIG. 11C



148/223

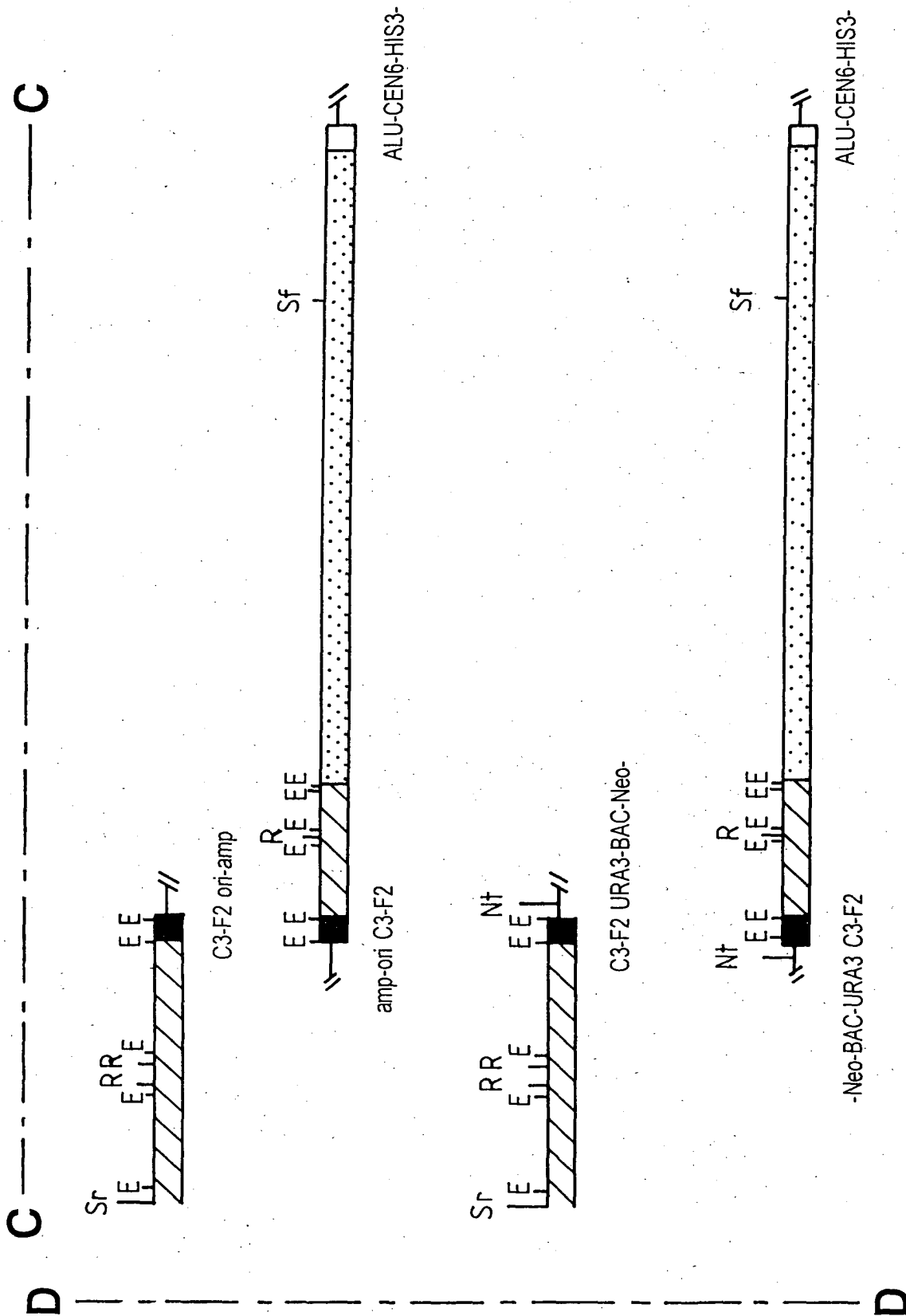
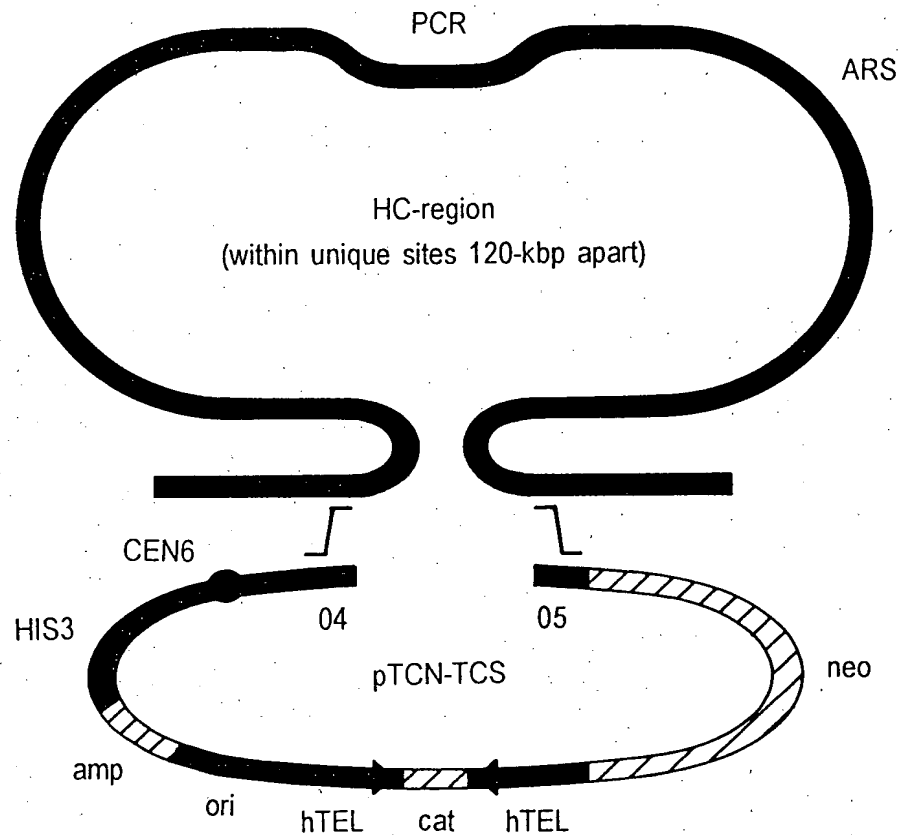


FIG. 11D

149/223

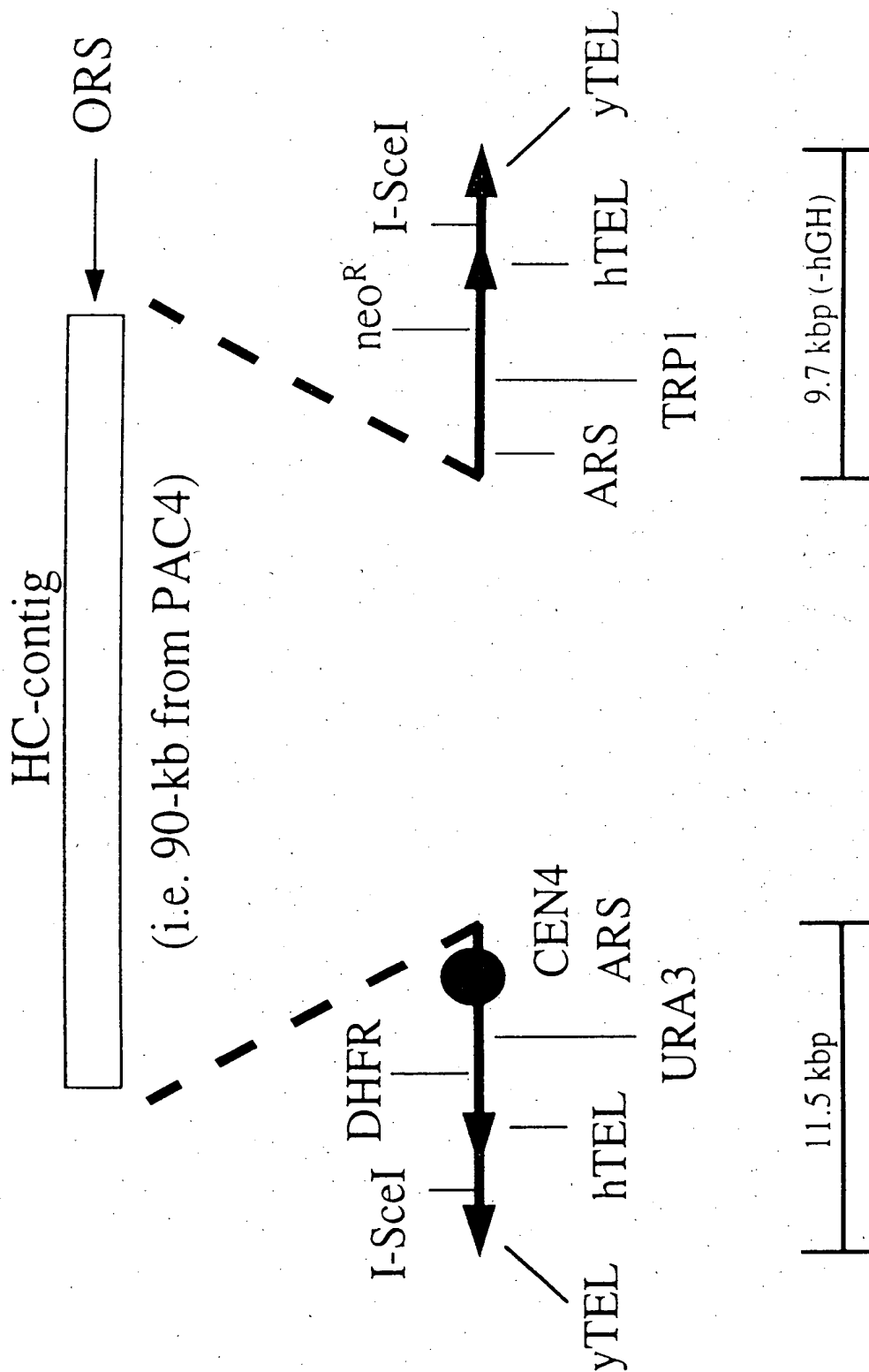
Specific TAR of HC-region from mar (del) 10



1. Co-Transformation into YPH857
2. Select for HIS⁺ colonies
3. Screen for HC-region by PCR
4. Prepare high-MW DNA
5. Digest with I-SceI to expose hTELs
6. Transfect HT1080 cells
7. Select for G418^R
8. Analyze by PFGE and FISH

FIG. 12

150/223



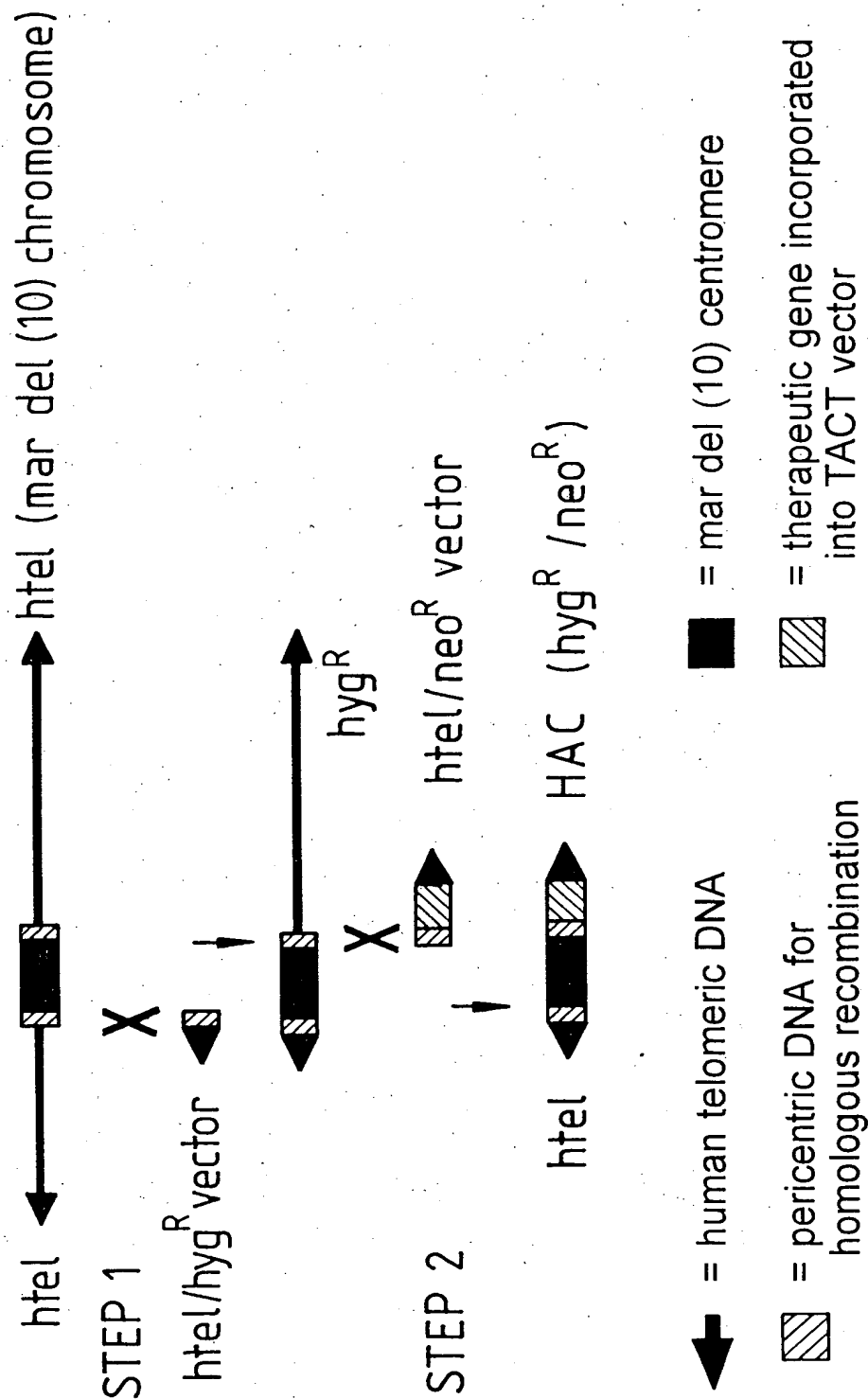
Cloning in Yeast as YAC/HAC

FIG. 13

151/223

FIG. 14

Outline of TACT procedure



152/223

TACT constructs

FIG. 15A

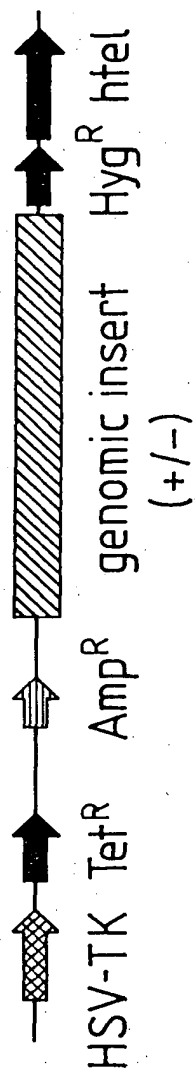
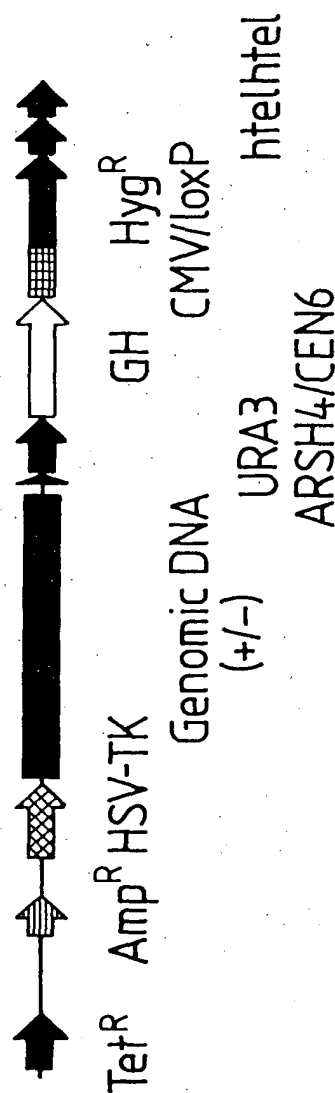
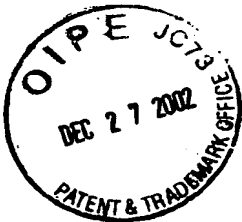


FIG. 15B





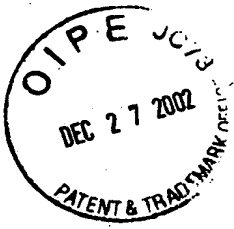
09728552 . 122702

153/223

NC-Contig (80225 bp)

TGGTTGATTTGTNNIATAAGGAAGTTTGGAAATCAATCCCGGAAGGAATTTTTTTTTTAAAAAATTTTTT
GAAGGGTTTGGTAWTAAAAAARCCAATTTGGGTTTTTAAAAATAGGAATTTTATGGGAAAAAATTTTCC
CTTTTTTTTTTAAAGTTTAGATGTTATGTTTCCATTATACITAAAGTGGGTGCTTATAGGCAGCAT
ATATCTGGGCTCTTGATGATTAATTAATCTGATAATCTCAACCTTTTTTGTGGAGTGTTAGGCCATTT
ACATTTAGTGAATTAAGACATGGTTGATTTGCTATACCATCTTTTCATTTTGTATATGTAGGCC
ATCTTTTCATTTGTTCTTTTCATCTTTGACCATTTTCTTTAGTACTGAATACCTTTTTTGTATTTTCAT
TATATCTATTTGGCTTTTAGTTATACCTCTTAAAAATTTTTTTCTGTTTATGTAGGATTTATAATAT
ACATCTTTAACTTATCAGAGATTACCTTCAAAATAGTATTTTACCAGCTCAAGTGTATGTAGAAACCTT
ACAAGAGTATATTTTCATTTCTGCTCCTAAATTTTATGCTATTTGCTATATACATAGGTTTGTGT
TGTTTGTTTTACCTTATTTGCTGTTGGCTGGGTGAGCAAAACATTTTCTGTAAGGGCTAGATAGTACA
GGCATACCTTGGAGATACTGTGGGTTTGGTTCATACCCACCAATAATACAAATATGCAAGAAAGTGGA
TATCACAATAAAGTGAGTCACACAAAGCTTTTGGCTTCCCAGTGCAATAAAAGTTTGTCTTATAC
ACTGTAGTCTGTTTCAGTGTGCAATAGTGTATGCTAAAAAACAACATACCTTAATTTTAAAAATGCTTT
ATTACTAAAAAATGCTAACAAATCATTTGAGCATTCAGTGAGTTGTAATCTTTTTTGTGGTGGAAAGTCT
TTTTCTTATTGATGACTGATCGGGGTCAGGTGCTGAAGCTTAGGGTGGCTGTGGCAGTTTCTTAAACA
ACAGTGAAGATTGCAATATCAGTTGACTCTTCTTTTATGAAAGATTTCTCTAGTGTGTGATGCTTT
TTGATAGCATTTTATGCACAGTAGAACCTTCTTTGAAAAATTGGAGTCAATCCTCTCAACCCCTGCTCTGC
TTTAAACAACCTAAGTTAATAATAATTTCTGAATCCATTTGTTGTCATTTCAACAATTTTCACAGTGTCTT
CACCAGGAGTAGATTCATCTTCTGAGATGGAATCTTTGCTCATCCATAAGAAAGAAATTCCTCA
TCTGTTCAAGTTTATCATGAGATTGCAGCAATACAGTCATGTCTTCAGGCCCTCACTTCACTTTTAAT
CCAGTTCTCTTGTGTTTCTACCAATCTGTGGTTCTTCTTCCATTTGAAGTCTTGAACCTCTCCAAAGT
CATCCATGAGGGCTGGAATCGACTTCTTCCAAATTCCTGTTAATAATTTATATTTTGACCTCCCATGAAT
CATGAATGTTCTTAATGGCACCTGGAATGGTGAATCCTTTCCAAAAGGTTTTCATTTACTTAGTCCAG
ATCCATCCATCCAGAGGATCCACTTTCAATGCCAGTTATAGCCTTATGGAATGATTTCTTCAATAATA
AGGCTTGAAAGTTGAAATTAATCTCTTGTATCCATCCATTTCTGCAAAATAGATGTTGTGTAGCAGGCATGAA
AGCAACATTAATCTTTTGTACATGTCCATCAGAGCTCTTGGGTGACCAGGTATATTTGCCAGTGAGCAG
TAATACTTTGAAAGGAATTAATTTTCTTAGCAGTAGGCTCAACATGGGCTTAAAAATATTTGGTCCAC
CATTCTGTAAACTGATGTGCTGCATCTAACTTTGTAGTTTCATTTATAGACACAGGCAGAGTAGAT
GTAGCATAAATCTTAAGGGACTTAGGATTTTTCAGAAATGGTAAATGAACATTTGGCATCAATTTAAATCAC
TAGCTGTATTAGCCCCCAACAGAGAGTCAGCCTATTTTTTGAAGCTTTGAAGCCCAAGCGTCGACTTCT

FIG. 16A(1)



09726552, JUNE 7, 2002

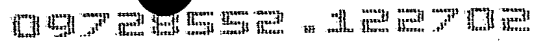
154/223

A

CCTCCCTGGTTACAAAAAGTCCTAAATGGCATCTCTTCCAATATAAGGCTGTTTTATCTACATTGAAAA
TCTGTTGTTTAGTAGCCACCTTCATCAATGATACATCTAAATCTCTTGGATAACTTGTGCAGCTTC
TACATCAGCATTTGCTACTTCACCTTGACTCTTATGTAATGGAGTGGCATCTTTCCCTCGTACCTCATG
AACCACCTCTGCTAGCTTCCAACTTTTCTCTGTAGTTTCCCTGCCTCTCTCAGCCTTCATAGACTTG
AGGATAGTTAGAGACTTGCTTTGGATTAGATTTTGGCTTCAGGAAATGTTGTGGCTGGTTTGATCTTCT
ATCCAGACCCTAAACTTTATCCATATCAGCAATAAGGCTGTTTGGCTTTCTTATTTATTTGTGTGTT
ACTGGAGTAGCACTTTTAAATTTGCTTCAAGATATATTTCTTTGCAATTCACAACTTGGCTGACTGGTGCA
AGAGGCTAGCTTTCAGACTATCTTGGCTTTTGACATGCCTTCCCTCACTAAGCTTAATCATTTCTAGCT
TTTGATTTAAATGAGAGATGTAGGCCAGGCACAGTGGCAGGCACAGTGGCATATGCCTGTAATTCCAA
CACATTAAGAGGCCAAGGTGGGAGGATTGCTTGAACCCAGGAGGTGGAGGTTGTAGAGATCACACCACT
GCATTCCGCTGGATGACAGAGCAAGACCCCTTTCTCAAAATAAAATGAGAGGTGTGCTTCTTTT
GTTTGAGCCCATAGAAGCCATAGTATGATTTTAAATGGCCTAATTTCAATACTGTTGTCTCAGAGA
ATAGGGAGGTCTGAAGAGAGGGAGAGAGGTGGGGAATGGCTGGTCAGTGGAGCAGTCAGAACACACAT
AACACTAATAAATGTTTGTCTCTTATATGATGTTGTTGATGCCCCCAACAATTACAATAGTT
ACAGCAATATCACTGATCACAGATCACCATACAGATATAAGAAATCATGGAAAAGTTTGAAATATTTT
GAGAATTAGCAAAAGTGTGACACAGAGAAACAAAGTGAGCACATGCTGTTGGAAAAAATTTGGTGTGATA
GACTTGCTCCATGTAAGTTTGCCATACGCCCTTCAATTTATAAAAAACACAATATCTAGGAAGTTCAATA
AAGTGAAGTGCAATAAGATGAAGTATGCCGTGTAATATTTTCAAGCTTTCCAGACCATAGGGTTTCTGTT
GCAACTGCTCACCTCTGCCATTATAGCATGAAAGCAGCTATAGAAAATATACATAAATGAGGCCCTGTAA
TCCCAACACTTTGGGAGCCCAAGGTGGATGGATCACTTGAGTCCAGGAATTCGAGACCAGCTTGGCCAA
CATGGCAAAACCCCGTCTCTACTAAAAATACAAAAATGAGCCAGGACTACGCATGCCGTAGTCCCAGC
TACTTGGGAGGCTGAGGCAGGAGAAATCTCTTGAACCCGGGAAGGGGAGGTTACAGTGAGCCAAAGATTGT
GCCACTGCACCTCCAGCCTGGGCAACAGAGTGAGACTGTCTCACAAAAAAGAAAAAGGAAAAAGAAAAATA
CACATAAATGAATGATGTGGCTGTGTACCATATATCTCTCATGCTTAGCTTGCCAAACCTTGCTTTA
CACTGTCAAGTACCTTCTAAAGAGATTAAAAATCATAACAATATCTATTACGTTTATTACATCCTAGT
GTCATTTCTTCTTATGTAGAATCAAAATTTCAATTTCTGGTATCATATTTCTTCTTTCTAAATAATTTCTCT
TTAATAATTTTATAGCACAGGTCTAATAGCAATGCAATTCATTTGCTATTAGACCTGTGCTA
TAAATAGCAATGAATTATGTCAGTTTTTATTTGTCTGAAAAAGTTTTTGTTTTTTGAAATATACTTTT
GCTGGGTATATAAATCCATGTTGCATAACTTCTCTTTTCTTCAGCACTTTAATGAAGTCACTCAGTTAT
CTTCTGGCTGTATAGTTTCTCTGGCTGCCCTTCAAGATTTTTCATTTGTCTTTAATTTTAGCAGTTTG
ATGTGCTAGGAGTATTTCTTTGTATTTATCCTTTTGGGGCCCTCTTAATTTCTTTGATCCTTTTTT
TCCTTTTTTTTTTTTTTAAACCATTTTGGGTCTTTCCCCCATTTGGGGTGAAAAAAGAAAAAATAA

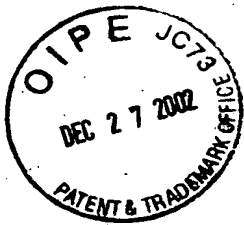
B

FIG. 16A(2)



AATCATAGTTTAAAAAACTAAATTTTGGAAAAATTTTCAGCTATCATTTCTTCAAATATTTATCCTACTCT
ATGCTCCCTCCCTCCCTTTCCTTCTGTGACTCAAATACAGGTATATTAACCATTTTATTTGTTTCA
GGCACTTGGATGCTCTGCTTTCTTATTTTGTCTTTCAATTTGGATAAATTTCTACTGACCTATCTTCA
AGTTCACTGATTTCTTTTCTCAGTCATGCTAGTGTGCTCAACGCTGTTGAAGAAATCCTTTGTCTTTA
ATATCATGTTTTTATTTCTAGCATTTTCATGTAACTCTTTGTTCTGGTTTCCATCTCTACTCACTT
TTTTTTTTTTTTTTTTTTTTTTTTTTTTTAGACAGAGTCTCGCTCTGTCAACCCAGGCTGGAGTG
TAGTGGCGGATCTCGGCTCACTGCAACTTCCTCCCTGGTTCAAGTGATTTCTCTGCTCATCTC
CCGAATAGTTGGAATTACAGTGCCCAACCCGTGGCTGGCTAATTTTGTATTTTGTAGTGGAACA
GGGTTTACCATGTTGGCCAGGCTGGTCTTGAATTCCTGACCTCAGGTGATCCACCTGCCTCAGCCTCC
CCAAATGCTGAAATTACTGGCATGAGGCACTGCACCCAGCTCTGCTGACATTTTATCTTTTGTGCGA
TTTTTGTCTACCTTTTCCATGAAATCCTTAAACATAGTAGTCATAATTAATTTCAATTCCTTGTCTGACA
GTTCTGACATTCAAGTCTAGGCTGTTAATACTTTGTGAATCTGTTAACAGCTTTTTCATTTCTTGT
TGTGTGTTTGTATTTCTTGATTGTATGCCAAATATTTGCCGTGTAATAAATTAACCTTAGATAAGTCATACTT
CTATCCAGAAATAGCACATTTTTTGTGTCCAGTCATTAATGTGGAGGAGTTGGGCAGTCTATCAGTGGC
TGAAC TAGTTTGGATTTGTGATGCTATACTTAGAATGCACCAAGACTTCCATTCACCTGCAAGAGTGGC
TGCTGGCTTTGTGATTCATGTGAGGCCGTAATTTGTGAAGGTTTTTCTTAGTGTGCTCCCTCCATGC
TCAGATTTACGCAAGTCTTCATATCTGTGCCACAGAGGAATCTGACCCATGCTCTTTTGACCTCCCC
AAGTGATCAACTGTTGCTTGTATAGCTTGTATGGAGTAAGAGGGTGTTTTTTAGTTTTTCATCCTCC
AGCCTTGGCTTGGCCCTGAGCTCCTAGACTCCAGGAGTGATGGAATCCAGTGATTTCTCAGTAAT
CAGCCCCCTTCTCCAGTAGTGGCAGATCTCTGCTTTGTATCAGTGCAAGATCCTGGGCTGAGCTCATTTT
CTGCCCTTCTCGAGTGGCAGACAGCTCTTGCTTTCAACCCTTCTACCAAAGGCAGTGCACTTTTCTTG
GGCCTCTCCCCATGAACCTTATGACTTTCACATAAGAGAAGGGCTCATGTATCAGAGAAATCTGTGACT
TTGTGCCACATACAGAGTCTCTCAGTCTCTTGGCCCTGCCCCAGTCTTTTGTGAGCACCTAGTAGAG
ACCCTTGGAGAAGCAAGGAGGATGGACTCTTTTGTGTCTGTCGATTGCTTGTCTCAAC
TGCTACTCTTGGACTTTAAGAAATTCATTAATAATTCAGCTGTTTTCTTTTTTCTTTTCTTTTCTTTT
TTTTTTTTTTTTTTTTTAGATGGAGTCTTGCTCTGTTGCCAGGCTGGAGTGCAGTGGTGATCTTGG
CTTGCTGCAACCTCCGCCTCCCGGTTCAAGCATTTCTCTGCTCAGCCTCCCAAGTAGTTGGGATTA
CAGGTGCCACCAACCAACCTGGCTAATTTTGTATTTTAGTAGACACAGGTTTCAACATTTTGGTC
AGGCTTGCTCAAACCTCCTGACCTCATGATCTGCCCGCTCAGCCTCCCAAAGTCTGGGATTAACAGGC
ATGAGCCACCGGCCAGGCTCAGCTGTTCTCTTTTACCTGCTGGATGGCTAGTTTTCTGTGTCAAC
TTGACTGGGCCATGGGATGTCCAGATATGTAATTAACAGTATTTCTGGGTGTTTTCTGTGAGGGTGTCT

FIG. 16A(3)



097 25 52 . 122 702

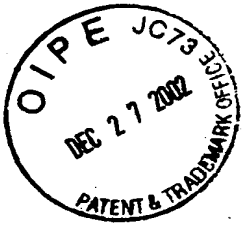
156/223

C

TCAGAGAGATTGTCATTTGAATTTGGTGAACCTAAGTAAAGCAGAGGGCCCTGTCTAGTAGGGGTAGGCA
TCATCCAGTCTGTTGAGGACTTGAATAGAACAAAGGAGGGAAGTTGGAATTTGCCCTCTCTGCT
TGAGCTGAGACATCTATCCTGCCCTTGGCAGCTCCTGGTCTCAGGGGTTCAAGACCTGGATTCCCTGGTCT
CCACCTTGCCCATGGCAGACTGTGGACTTCTCAGCCCTCCTATCTAATTAATAAATTTTTTTTACACA
CACACACACACACACACACACACACACACACACACACACCTATGTATCCTTCTGTTTTCTGCA
GAACCATATTTAATACACCTGCTTTTATGACGATTACCTATCGATTCTGTATTTCTGCCAAAACCTGAAA
CAGTTCATTTTCCATCTCTCTCAGAGAGGCTTGTGAGCCATTAGTTCTCTGATGGGCTCAAGAAAGTT
ATGCAGTTTTTTTTTCTCACTGTTAGGATGGAATGATATTTCTGTTGAACTTTCTATACCTAAGTGG
AACTTGTTTTGAGGTTATTTCTCTACTTTTCTGCTGGAAATGGAACACTCTGTATCTAGTTAAGA
CACATAAAGTGTGTGATACCATATGTTGTTGAAATTTTATATTTAGAAAATCATCTGTCAAG
GTGTTAACTAATGGCAAAGCATTTAATAAATCAGCATTCATGTATTCAGGTGCTCTGAATTTATCTGACT
TTTTAAATTTCTACTTTAATAATGAGAAAATTTGGGCATGGAAAAGTTAACTCTCCTAACCCCGAATTAT
TACATTTAAGGACAGGACTTAGAGGCCAGATATCTTAAGTCATTAATATTTCTTTGGCTCACAGAATT
GGCAGTATAACCTAAAGGTAATAACTAGGTGATTTTCTTTTATATCAATTAATAATGTGAGTTTCAAA
TATTCATAAGTACCTACTGTGAGGGAAGAAACATGCCATACAAAAGATGTAGTCCAGGCTTTAAGAA
ACTTTCAATTTAATGGGAATCAAGAGTGTACATATAAGGAGGGAAGTAGCAGTATGGTACAAAGATAAT
ACATACATATCAGTGAATGATATTGCCAAAAGTGCTATTGATAGAGCAATAATTCATTTCTGCAACA
GCTGCTGATCTCCTACTGAAAACAGAGAGGGAAGAACAGGACGCTCGTGGTCAGGATAGAAGAGAAAAG
ACCTTGAGTTGAGCCTTGAACAGTATTTAATAATTCAAAAGTTAAGAGAGGAGAGCAATTGAGGAGGGG
AGAATAGTTCCAGCACAAATGATGGGTACAAAGATGAACACAGTCAGTAAAGAGCAGACTGGTCTGGAT
GGAGAGGAGGATTTGCATCATTTGGGATTAACGTCAATTTAGACCTTGAAAGCCAGGATTGAGTAAAGCC
ACAGTGAAGCGACTGGCTCGTATGGAAGCTTTATTTTAAAGAGATTAATCTGGTAGTGACATGTGCCAA
AACTGAATAGGTAGAAATGAGATGCAGAGAGCCAGTTAGAACTAAGTCTGGTGCAGTAATGCAGGAT
TGAGGCAATAAACACCAAACTACAGTATCACCAGATAATGGATGTTTGAACGGACGGTTTAAAGGAAAA
TTGATGGTATTTGGTAATTTATTAGATAATCCAGGGCCATGGAATGAGAGGGGAAAATGACTAACCATTA
GTCAATCAATGGTTTTTCTTAATGAATCTGAATTTTGGTGTAAAGAGCAACATTTTCTTAGGCCCTTGCCCT
AGTTGGTACAGCTGACTATGATAATGACTGCTACCATGCTTGTTCCTCTTTTAGCAGCTGTGAGTCCCC
CACCAGCCAAACAATGAGCCTCTTGAAAAGGACGATGCCTTTTCACTTCTCTCCAAAGTGTGGCAAT
AGGAGGCCCTTTTGAAGTTACTTTATAGTTAGGGGTCCCAGTGAGTATTTGAAATATTAAAGTCATGCC
GTGTTGACAGCATGGCCCTACTGCTCATCATCAGCTATTAACTTAGGCAAGTTAATGAACCTTTTCTA
AGCCCCAGTCTACTCATTTATAAAGTGGGATTTAATAATGTCTACTTCATAAAAATTTATGAAGCCTGA

D

FIG. 16A(4)



09728552.122702

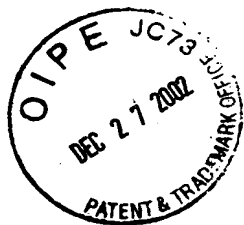
158/223

E

TCTGGTAATGTGGTCTGGGCTGAAGGGCCCTTTCTAAGGTTGTAGATAGAAATCCAGGAAACTTGTTAG
AACTGCAGACCTATCAGGTACCTGCAGGAGGTGAGTCTACTAAGGTGAAAAAGCAGAGGGCAGAGGTC
GTGATTAGCAGCTGACCGCCCTGCTTTCTGTCCCTCATTCGTGGAAAAATTGAGTGGAGCTCAATTT
TGAGTGGAGCTCTAAGTAGCTCCACTTGTAGACATTGAGTGGAGCTCTAAGTGTCTTCAGAAATAGCAAA
ACACTAGTTTTCTTTTTCTTTTTTTTTTTTTTTGGGAGACAGAGTCTTGGTCTGTCCCCCAGGCTG
GAGTGCAATGGCACGATCTCCGCTCACTGAACCTCTGCCCTCCCGGTTCAAGCGACTCTCCTGCCTCAGC
CTCCCGAGTAGCTGGGATTACAGGTGCCACACACCCAGCTCAAGTGATCCGCTGCCCTTGGCCTC
GAGGTTTCAACCGTGTGGCCAGGCTGGTCTCAAACCTCCCTGGCTCAAGTGATCCGCTGCCCTTGGCCTC
CCAAAGTCTGGGATTACAGGTGTAGGCCACACACCCAGCTGCAAAACCTATTTTCTTGAATGGAG
AAACACTTTCCCTTATTATTAGTTTGGGAAGCAAGAGGGTAATTCTAAGTGAAAAATTCC
AAAATCCAGAAAAACATCGATAAAGCAGCAGCTTAATTTTTTAAGGAAGAAATTTTTAAACTATCTTCT
TTTGAGCCTCTTTAGGAAGACCTCAGTCTCTTGCCTTGAATGTTGAGAGTGGGAAATCCAGGGAGGTTT
TGGAAATGCATGCCCTTATGTCTGCTTTTTTGTGTTAGAGAAATATAATATTTATCTAGGTTTTGCT
GATGGCAGTCAAGCATGAACACAAACCCACTGTTTGAGAAGCTGTAATTTCTGAATTTCTGCAGAGTGCA
CATCTAGGCCAGCAAAATGGCAGTAAGAGTGAGTGGATTAGCTCAGTGTAAGGATGAACCTCCAGAAC
ATCGGCTCTGACTGAAAGTGAAGCGGCAGCCGCTGTGGGAAAGCTGGCTGGAGTCTCTCTCATAAGC
AGGCATTCTTTTCTCCAGCCGTCACGTGTGTTGGTTTGGCCCCACGGTAAGCCTCCTGGCTCTAGGC
TGTAACCCCAACCATCCTCCTGCTGCTGCCCTCCAGAGTGATTGTTCTGAAGCACAACTGGATGTCAAT
CCCCCTCCTGAACCTCCTAGCACCTACAGGACTCCATCCCTGTGCCCCACATACCTCACACGTAGACA
TTCCCTAATGAAGATTGATTGAATTAATTGTAAACTCAGTGCCTCCACTCTTCAGTTGCCCTCTGCCC
TGCCCTTTGTACATTTATTTATTTATTTATTTATTTATTTATGAGACAGAGTCTTACTGTATCAC
CAGGCTGGAGTTAGTGGCACCATCTCAGCTCACTGCAACCTCTACCTCCAGACTCAAGCAATCCTCC
CACCTCAGCCTCCCAGGAGCTGGGACCATAGGCACGTGCCACTATGCCCGGTTAATTTATTTGTAATTT
TTGTAGAGATGGGTTTCATCGTGTGGCCAGGCTAGTCTTGAACCTCCTGGACTCAGGCGATTCCGCCCC
TCTCAGTCTCCCAAAGTGTGGGATTATAGGCGTGAGCCACCATGCCAGCCGCTAGCACTCATCTTAA
TCGTATATTACTTATCTGGCTTTCCACACAGACTGCGGGCTCTTCAAGAGTAAATGCCATGTTTTCAC
CTTTATTTCCCAAGTTGTGGCACATTCTAGGCACCTCGCCATCATGAAATAAACCTCTGGAGCTGTGAT
ATTACAAACGTGAAAAGATGACGAGCACTCAGCAACTTTCAGTGAGTAAACAAAGGCTTTCATTCAGCA
TGTATTTATTGACTGCCCTGATCTGGGCTGCTTCCCTGTCTGTGGTTCAAGGAGAGCATAGTCTACAGAA
CCAGAGACCTGGCTACTCTGGAAGTTAGACTTAAGCCACCCCGGCTCCTTGAATGGGAAATATTTCCC
TTCATTCTCTGTGTTTTAGGGACAGAAAGATGAGTAATGCAGTGATACATGCTGGAAATGTTTATTCAC

F

FIG. 16A(6)



09/26/52 . 12/20/02

159/223

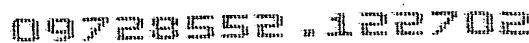
F

TACCCGAAGCTGCCTCTCAACTTAACAATCCATGAAAGAAACAAGATGGTATATAAATTTTCTAATTT
GTGATGCCTTTGTTTATTTGTTCCGGTTAAAGAGAGAGGTGGCATTGAATGTTTGGTTTGGTTTGGTT
TCTTCTCAATAAGAAGCATCTTAATAATAACTAGACTGGACATCTGTCCCATTTTCAAAAATTACAAGT
TTCGATCATTTGCTAAATTTGTACAGATCCCAATCTGTCTGTCTGCATACATTTGCAATTTATAAAGCAG
AAGCAGACTAGCAGTCTTTCTAATGCAATCCCCCAAAATGCATGAAGTATTAGATGCTTCTCCCTATTG
GTTTCATGCAATGCTAAAGGCTTAAAGGATCATTTGATTTTAATTAATGTTGACAGCAGGCTGAGC
TTTCTTTCTTTTAAAGGGAAGAACCTTCAGGGGCATTCGTTTAGTTTAAATGTTAAATCTCATTTT
TCTTTGAAAATAAGAAGTTAAAGCTGATTTACACACAGCTCTCAAGTCCAGATTTTCATTTGTGTTT
TAAACCATCTAGGAAATGTTTGATTTCTAATGAAACATTAAGTCTGAAAATTTGGGCTGAAATTTGCTGGC
TGAAAATATTGTTATAACTTCACATGATTCAGTGTGATTAATTTTCTTTTCTTTTCTTTTGTGAC
CCGATATAGATGAAGCGAAGAGACAAAGGAGCAATCCCATGTGTAATAAATAAAGGCAAGCTGAAATGT
TGTTGCTGTTTTGAAATTTAAGCTGTTTTCAATTAATTAATGAGTAAATGCTCCAGGACTATAAATGTT
GAACATTTTTTACCGTGTGATTTAAATTTAGTTTTTAATGTTTTTTTTTGGGTTTTTTTTTTTGTGAT
GGTTTACATTTTCCCATGGAAAGCAGCTATGTCATGTCGGCATGATTCATCATGTTAATCATCTCGGGT
TATTTTGGTTTGTGTTATGTTTCAAGAAAGCGGAATGCCAAAATAAAGAGTGGTTTGTGATGTTCTAGTGT
GTCTTCTTTTAAACAAATCAAGGCTTTTATTATTAATCCACTTAATGGGACACTGCAGAAATTTAAAAAAT
GGAAGTCCCATCCACAGAAAGCAGGTAATGATGTAATAAAGTTTAGTGGGGATTAATAGAGTGATC
ATATAATTTATGAGCTAAACCGGAGGCACTTTTTTTTTTGAGATCGAGTCTCACTGTTGCTTAGGCTGG
AGTCAGTGACGTGATCACAGCTCACTGCAACCTCCGCTCCCGGTTCAAGCGATTCATGCTCAG
CCTCCTGAGTAGCTGGGACTATAGGCGCCCAACCATGCCAGCTAATTTTGTGTTTGTAGAGA
TGGGTTTCAACCATGTTGGCAGGCTTGTCTCAACCTCCTGACCTCAGGTGATCCGCCCCACCTCGACCT
CCTAAACTGCTGGGATTACAGGCGTAAGCCACCATGCTGCGCCAGAGACACTTTTGAGAGTGAAGAGG
AAGCTGAGAATAATTCATGATCTCAACTGGGACCATCCAGGGCAAGCCAGATGCCATTACCACTAGC
TAGAAAGCTTGGCAAGGCTCTCATTTACCTTGGTATATAGCAATTCCTCTTTGAATCTGGAAATTCG
GTAAGTCATTTGAGGTAGCTCTGTGCCAAGGAGCAATATGGTAGAATTCATAATTTTTCAGGCAGTACAAC
ACTTTCCTGCAATTTGTAGCAGGTAAGGGAGGTCAGGGCAGAAAGCAAAACCACTGGGACTCGACAAAG
GGCATAAACGCTAATGCACCTGATGTAGCTGATGTTAAATTTGTTATCAGCTAAAGATCTTTTCATAATA
AATAAATTTATCATTTGTAGGAGGCGACAGAAATCGTGGAAAGCTGGGATTCAGGTTGCCTGTGGCTTT
AATTCGGAATCAGAAATATTAGTCAAGGATATCAGTCTATGAAGTAAGTTTCAATGTTATATGCCAC
AAGATGCAAGCTGCTTATTTTCACTTCCAGTAWTTCTTCTGTAATTAATACACCTTAAATAAGCTGCA
GCTTCTCAAAATCTGTGAGAATCGTATGTGCTGCTTCTTCTTTTCCCGAAGGCTCTTTTGAG
GTCTTTCAAGAACTCAATTCAGCAACAATTAGGGGTTCTAAGGTATACAGACGCTGTGCAAGAT

G

FIG. 16A(7)

G



I

FIG. 16A(8)



I



09726552 142702

161/223

H

CCAGAGAGCGAGGCTCAGCCTGTAAATCCCAGCACTTTGGGAGCGGAGGTGGGCAGATCACCTGAGGT
CAGAGTTTGAGACCAAGCCTGGCCAATGGCGAAATCCCGTCTCTACTAAATAACAAAAATTAGCCGAG
CATGGTGACAGGCACCTGTAATCCAGCTGTTGAGTTGGCTGAGTCAGGAGAAATAGCCTGGATCCGGGA
AGTGGAGGTTGTAGTAAGCCAAAGATTGCGCCACTGCAATGCCAGCCTGGCGCAGAGCAAGACTTTTCT
TAAACAAACAAACAAAPGAAAPGAAAPGAAAGGAAAGAGAAAGAGACAAAGAAAGAGAGAGAAAG
AAAGAAAGGAAAGGAAAGAGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAG
AAAGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGG
TTCTGAGAAACTCACATCCCTTTTGATGAACACAAATGCTTACACTCTCAATGTTATTGGTAATCCAA
GTTATCAATATACCTAAATCACCTTAGTACTGAATCTGGCATATAGTAATCACCTAAATGAAGAGATAAGA
GTCATGGAGTATTCTGAAGCAATTAGAATCAATAGACTCAATATACACATGGCAACAAAGTTGGATCTT
AAAAACCGACCTGAGTGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAG
ATATGCTTACACAAATTTGTAAAGAACACATACAAATAGATACATGTATATTAAACATACTCGAACGGTTA
CCCTATGGGGTGGTGGCTGGAGTGGGGTAAAGTCCGTAAAGCTGTAATGGAAACCTAAACAAATACATGAA
ACGAGTAGGAAATCAGAAAGGAGTAACAAATAAAATGTGCCATGAAGTGAAGGAGTGTAAATTAATCAACTC
ACTGCATCTGAGTTAAATAGAAAGATGATAATTGTTATTCTTATTACTCCTAGGTCTTCCACTTGC
ACTCAGCTTTACAATGTTGGACTATCCTTCAGATGGCACCCCTCCTTGCACTTGTCTCAGGCAGGAGAGCT
TTTTCTCCAGCTTTCTAGTGATTTAATATATCAGGGAATAAGTATAAAAGGACACGGTGTCTCCCT
GGTAGCCTTTCTGGACTTCAGAGCTAAATTGCAAGTCAGTTTACACATGTGATTTTCATCTATGAAA
TTAGGGCAAGGTATAAAACTGGCACAGAAAAATGTGATTTATTATGGTGTACTATCCCTTACAAGCG
GAGTGTGAGCTGCCTCTTTTGTCCACTGATTTAAGGCAAGATGAACCTGAAAGTGGCTATGATCACGTC
TTCAAAAGCACACTCTGGCCCTCGGCTGCAGGCGCCCTGCACATTCCTTAGCTCCGTCTTGTGGCACAGC
ACACAGTGCATAATTGTGGCCCTTCCTGGTGCAAACTGTCTCACTTAGCTCCGTCTTGTGGCACAGC
AGAAAGGAAGAAATCGAAATGTTGGATTTCAAGGTAAACAAGAGCTGGAAACAACTACTGGCCGA
GTCTGAGAGTTTCAGCGGAGACTGGTGACGCTTGTGTTTTTCCACTGACAGCTGAAATGAGCCACAG
TTCAGTGAAGCTTGTTCCTTCCTCCTCAAGGTTACCCACAATTCCTCAGTTCTCTCAGGAAAGCCAAA
AAATGAATTTGAGGGTTAGGATTTGGTTCTTTTATCTATTACAGGATTGATAATATGTTCCCTCCACC
AGATGTTCTGCTTTGTAACAATACTCACTTCTGACACTACTGCATATGCAGGAGTGTCACTACCAAGGT
AAACACAGAATTGGCTGCCAATTCCAAATCCCTGAAGTGAAGTGAAGAAATCAGAAATTAATAAGGGG
ATTCAACAGAGCTGGCTACGGATGTGCCAGTGGTCAGATACTTGTCTCATACGAGGTGTCTGCTGC
TCTAGCAACTGCTCACTGCTTCAATTCCTGCTTGGTCTTTAAATACTGCTTTTCTCAGCTCAATTGGC
TTTCTTCCCTCTGGCAGTCAGGTTTCTTTGGGTCAACAGCAATGATTTCTTAGAATCACCTGGTACT
CAAAGGAGCTACAGACATTGGGCATCCACTTCCACTCTCTTGGAAACAAATTTTATGGAAGCCAAAGG

FIG. 16A(9)

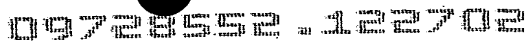


09728552.122702

162/223

TTGCCATAGTGCCCTCTTGAGGTTGTTTGCTCAGCCCAAGGCCCAAGCTTTGTGCTTCAAAACATGAAATTA
GAGAGCTTCAGAACAAAGATCCACATTTTCAATGGCCTCACCCAACTGGATAAAAGAACAAATTGCCATAT
CTCAATGACCACCTTTTCTCAGGTGGATGGTAGATGCTGGAATGGTCACAGCATTGCCCAACCAAAAC
TTTGCAAAAAGGCTGGAAGCTCTGACTGGGACCCCTAAATATGCAAAAAGTTAATAGGCTCTTCATGCA
GAATATGAACCCCGTGTATGGATATAGCTAAAGGTTGGCCTTTATGTTTCTATTCCCTCACAAACCTG
GTAGAAATAGATATGCTTGTTCCTTTAAAAAAATGTCAACAATTGCATTTATGATGCTGTGTATAGTAA
CTCACAGATCATGCTCCATGAAAATGCTTCAGAACCCCAATATAAGGAGATTTTTTAGCCATGTGTGACA
AAAGAGAGGCCATTTTCAGTGTGAAATGTTTCAGAGAAATTTGATTATGTTTTCTCAGATCTTTTTTA
TTTTTATTTTTTTTGAACACAGAGTCTCACTTTGTACCCAGGCTGGAGTACAGTGGCTGTGGCTCGGC
TCACTGCAACCTCTGCTCCAGGTTCAAGCGATTCTCTGTAGAGACAGAGTTTCGCCATGTTGACCAAGCT
GGCATGCACCAACCATGCTAATTTTTTGTATTTTAGTAGAGACAGAGTTTCGCCATGTTGACCAAGCT
TGCCCTTGAACTCCTGACTTCAGGTGATCCACCCACCTCAGCCTCCCAAGCACTGGGATTACAGGCATG
AGCCACCGTGCCCGCTGTTTCTCAGATCCTGTATTTTGTCTGAGCCCTTCAATTTCTATCTTCTT
ATTCAATTTTGGAAAGTAGTACACCTAAGTAAGGTTTTTAACAATCAATATCTTTGGAAAATTCCTCTGGT
TCCTTTCTTATTCCTACAAAATATGTTTCAGTATAGCTGATGTTATGTTTCTTTCAAATTTATTCATTC
TCTATCTCAGAAATTTATCTCATGCCCTAATGTTATTGAATAGTCTTCACTTCTTGTCTCATCCAGTTCTG
GTCTCTTATTTCACTCTAAGTCTAATTTGGCTATTAGAATAAAGAGCTTGTAAACAGATTCTTTCTCCAAAT
ATGCTTATCTTTTGACTGCTATGCCAGTGACAACTGTTAACTGTTTGTATCTTCAATAACATTCACACA
GAACATGCTGACTCCTCTCTCCTGAAAGCAATGCCCCAAGCACAGCATTTGTTAGATAGTATGTACGCCAA
CAGGGACATGGGTGCATAGCAAAAACCTAGAAAGGAGGAGGACCTTCTTAGCAATGGGTGATATGGTCC
CTGGACTTAGACTCCAAAGGCTCGTGAGGTGAACACACATCGTCCATACCCAGGAGCACACAGGTGG
GATGGAAGAGCTGTGCCTAATGAAACTTCACTCCAGTGGAGGTGGAGGCTGCAGCTGCAAGAACTC
AGAGCTGCCTTACCCAGACCAAGGACCAAGGAGGCTTTCTGGAGGAAACAGCCTCTGAACTGCCAGCT
GATAGAGGAGCTCTACCTCAACTCTTCTGGTTCCCCAGGCTGCTTTTCCACGTCCATTTATTGGCACT
GAAGTTGAATACCTTCAGGGGCCCCGAAAGCCTGCCAGTCTCTCTCTGCAGAGCAATCACACCAAC
CTGCAAAAGGCTAGGAAAGGCTGTCACTCTCTACTCAGAAACTGTTCACTGGAAGGACTCAGGG
GCCACTGAATACATCCTGGCAGCTTTCACAAAGAGGCTTCTGACTCAGGATGTTTCCATCTTTGCCA
GGTGGCCTTTTCTCCTTCTTAGAGTTTGGAGGACGCAATGTGCTGAGAAGTCAACCTTTCCCTGCAA
GGTGAGACACAAGGGCCTTTCCAGCAGAAAGAGAGCAAAATGGAAGGTCTCTTCTTCCCTCCAGTAGA
GGATGGACTCTGTGTGGCAGCCACCCAAACAGGAAAGCACAAATGCATGCCTGCCTGCTTCCCTCCCTCC
CTCCGTTTCTCCCTCCCTCCCTTCTCCCTTCCATTTCTTCCCTTCCCTTCCCTTCCCTTCCCT

FIG. 16A(10)



163/223

[illegible]

FIG. 16A(11)



09726552.122702

164/223

K

CAAATAAGGAATGTATTAATAGTCCACAATCAATGGTCAGTTAGCCGAGGGAAGATTAGCATAGTTAA
AGACTTAAATGGCTTAAACAATATATCAAAAGGACAAATAAAGGGGAACAGAGTCTAGAAAATGAGGA
AACTGGGACACAGGCAAAATAAATAAGAACTGGACATGAATAACGCAAGGGATAAGACTAATAC
ACAAAACACCCCAATAAATAGCCAGCATTTGCTGAGCTCTTACTGTGAGCCTGTTCTAAGCACCTTAC
ATATATTAACTCATTTCTCAAGGAACCATCTGAGGCAGGCACTGTTATCATCTCCATTTTACAGA
TAAGGAATAGACCCAGAGAGGCTGAGCAACTGGGCTATTCACAGCTACTATGGTGGAGATGAGATTT
AAATCTAATCATTTGGCTCAGAGCCCATGACCCCAATGGCTGCACTAAGTGAATGCATGCGCTATCAAC
GTTGCCAAAAGTGGGCCACAGCTCGGATCTGCGTTTTCCAGTAGCCAAAGCAGAGAGTGTGATCAGACC
TCACCTTAATAAGCAAGTCTCAAGCCAGAGAGAGTGGTATCAGGCAGCAAAACAGGCTGCTAGTCGAAA
TCCCACCTTCTCTGAGTGGTCCATACAGTTTACTCTACTTGTACAGAAATGAAAATAGCTGGAGT
TCAGGTGCGCTTCAATGCCCTGTTGTGAGGATTTGGCTTTTCAAGTTTATTTTTGTTGTTTTTA
ATAGACTGTACTTTTTAGAAAATTTTTAGATTTACAGAAAGATTGAGAGGATAGTACAGAGAGTTCCCG
TATACCTCACACCCAGTTTCTGCAATTTATTAACCTCTTACATTCATGCGGTACATTTGTTACAATTAAT
GAGCCAGGCGCGCCGACAGTGGTTCAGGCCCTTAATCCAGCACTTTGGAGGCAGAGGCAAGCG
AATCAGTTGAGGTCAGGAGTTCGAGACTAGCCTGACCAACATGGTAAACCTTTCTGTACTAAAAATAC
AAAAAATTAGCCAGGCATGGTGGTGGCTGTATTTCCAGATACTCAGGAGGCTGAGGCACAAAGAT
TGCTTGAAACCAGGAGGGGAGGTTGCAGTAAGCCGAGATCGTGCCACTGCACCTCCAGCCTGGGCAACA
GAGCGAGACTCCATCTCAAAAAAATAAATAAAGAAAGAAAGGAAAGGAAAGGAAATAATAGAGCCA
ATATTGAGACATTTATTACTAAAGTCCATGCTTTATGACAGATTTTCTTAGTTTTTACCTGCTGTCTAT
TTTTCAGTTCCAGGAATGCATTCAGGATGCCATACCACATTTAGTTCTCATATCTGCTTAGGCTCCTCT
TGGCTAGACTGAGTTTAAATCTACTTTCTGCAGAGCCTGAGAACTTTAGCATAAATTTCTTGAAAATTAC
AGCTCAATATTTCAAGCACTTATACAAACAGCCTAATGTACGTTGGCCCATACAGTGTTCAGAGT
AATAAACTTTCTTTGTTCTGTGCCGATTGAAAGAACTGCTGCTTAGCCTCCTGCCAGATGATGAACGTG
GGTACACACGAGCATTTTCCAGGTAAGCATATTTCTGTCGACCTTTAAGCTGCAGCCTTATATGCA
ATAATTGTCCATTTACAGACTTATGTTTCGAATTTTCAGGCACCTGTTTTCACATAACCATATCTTCAAC
TTTGATAAGTACTGCTTTAATCACTCAGAAAATTTAACTTGACTAATTTTTTTTTCACCATCAGTTTTTT
TTCTGTTGACTCTTTCTCTTTTCTGTTTGGCCAGAAACATGCTCAGGATTTCTCAGGCTTTAAAAA
ATGAAAAAATGTTTCTGCAATCTAGTTACTCTCTGATTCTCTGTTCTGTTTATCGCTGGAATTTCTTG
AAAGCTTGGTGATTAGTCTTTTTTTCATGCTGCTGATAAAGATATACCTGAGACTGGATAATTTATAAA
GAAAAAGAGGTTTAAATGGACTCACAGTTCCAGGTGGCTGAGGAAGCCTCACAAATCATGTTGGAAGGCAA
AAGGCATGTCTTACATGGCAGCAGACAAGAGAGAATGAGAACCAAGGGATTTCCCTTATAAAACCATC

K

L

FIG. 16A(12)

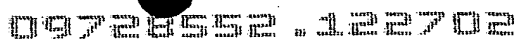


FIG. 16A(13)



09729552, 122709

M
TTTTAGCCAGTTATGCTACTAGCCAACTACAGACAACACACACTTTTTAAACCAAATTAGACTAATAGTTG
TCATCAGTGGAAATCAAGTTTGCCATTCTTCCATGCCCTTGCTCACACCAATTACCTTTTCTGGAATGTC
CTGTACTCATCTTCTGTGTTGAACTCTATACCCAACTTTAAACCTAGCTCAAAGTTCAAACACTTCC
ATTCCATTTCAAAAGAGCTTTCCCTCTTCCCTTAAAGTTTAAAGAACTCATTTTCATGAATCTTTTGGCA
TTTATTGCACACATGCTTGTGTTTGTGTTTATTTGTTTCATGCCCTCATATGCCCCCAAGGTGTTTGTAGAC
TCCTTAACGGGCAAAATGATGCTCTAAACACCTTTCTATCTTTTCATAGTGTCTTAGTCTGTTGTGTTG
CTATAAGGAATACCTGAGGCTGGGGAATTTATTTAAAAAAGAGGTTTATTTGGCTCACAGTTCTGCGAG
CTATAAAGAAAGCATAGTGTGAGCATCTGCTTCAGGTGAGGCTTCAGGAAGTTTCCACCCATGGTAGA
AGGCAAGGGGAGCAGGCATCACATATCAAGAGAGGAGGAAAAAAGGAAGAAAGGAGGGTGCCA
TTCTCTTTCAACAATCAGTTCTTGTGGAACTAATGGGACAAGAGGCTGGGCACGGTGCATGCCCTG
TAATCCAGCCCTTTGGGAGACCAGGTGGTGGATCACAGAAAGTCAGAAAGCCTGAGACCAGCCTGGC
CAATGTGGTGAAACTCCGTCTCTACTAAAGATACATAAATTAGATCTAGCTGGCCCTGGTGGCGGTGAC
CTGTAGTCCAGATACCTCAGGAGGCTGAGGTAGGATAATCACTTGAACCCGGAAGACAGAGGTTGCAGT
GAGCTTGTGCCACTGCCACTCCAGCCGGGCAACAGAGTGAGACGGTCTCAAAAATTTTAAAACTTTA
AAAATAAGAGCAAGAAAGCAAGTTATTCAGGAGGGATCCACCCCAATGACTCAAATACCTCCC
ACCAGGCCCTCACTTCCAACACTGGGGATCAATTTCCGTATGAGATTTGGAGGAGACAAATATCCAACT
ATATCACATAGTAATGAACATAGTACCTTATCTATAGAAAGCAATGGCTAGACAACTGTTGAATGGCTA
ACCAAATCTGCTTCTCTATGCTCGCTCTAGAGGGGTCAGTATGAGTTTCTGTCAAAAGGAGAA
AAAATGTATAGTCAGTTTGTGTGTGTGTGTTTATGTAAGAGATCAAGAGAAAGCAAGAGAA
ATCATGAAAAGGAGGGGAATATAAGAATAATACATAGAAAAAGCAATATCTTGTGTTTATCAGTAAT
ACCAAGGGGTAGAAATGGTAAGTAATAATCTTCTTCACTTGTCTGTAGTTCACTTTTTTGCACCT
TTATTTTGATGAATTCACATCGAAGACATTAACCTCATTAAAGGCTTCCAATATTTTGGAGATAAGAAAG
GCTGCTATGCTCTTTATAGATGGAAGAACTTGGTCAATTAATACTCAACAAAGGACATAACAAAGAAAT
GGAGCATAAACTGCCAGGTCCTGACTGTAGATTTGGATTCCAGTTGGTGTCTTGTCACCCCTTGTIAC
TCTTCTAAAGTTATGATCTTTTCTTGTGCATAGGAAATTCATAGTGATTTCCCATCACCCCTTGGGATT
ATCATAGCTCCTTTAAGGTCCCTCTATGCACTCAATAACATCAACAGTAAGTGTCTTCGAGCACTTA
CTGAGTGATATCATTTGTGTTCTCAGCAGCACCCACAGATCTCACCAGAACCTTAGCTGAAGCCCTGTA
GAATGAATAGGTAAGTACTGCCATGCCAATCTGGAGTACTCAAGCGATGCAATGATTCCTTTAATTGT
ACTTTTGCAGGCTTGTGAGTTTGTCTCATGGAGAAAGTGGCTACTGTCATCCATGTTATATCTATGTAATG
TTGGACTGCGAAGCATCAGTTGACTTTTCCAAAGCAGAAATACAGCTGATGACAAAGCTGCTGCTGAGA
AAATGGATATTTTCTGAATTCAGTTCTACGTGGAAACAGCTGACTAGTTTCCATTGCTGTAAAGATGGC
TCTTTTGTCTTGGTTGATTTTGTAGTAATGGCTTTACTTCTGTAGAAAGGAGATTTTCATTTGAAGTCCA
N

FIG. 16A(14)



00720552 . J22702

167/223

N

CTCAGGGATTTGGTTCAACAACTGGAGTACAGGTTTCAGAAAAATATCTCTTTAATCCTCCAATAATAA
ATTTTCTCATCTATAATTCTCGAACACTTTCATCCTTTGCAGCCGAGCATATAGATAGATTGTTGTGCTC
ACTGTGTTCTGATTGCCACTTTGACCTGCTTTTCAACTTAGGTTACAAATAGAACAGAAATCTCTCTGA
TTTTTCTCATTAATTGTTGAATTTCCCACTTTTCCCTCATTAGCAAGAAGTCCAGTATCTTCCCTGAGAAC
TTCCTTTTCTCAATCTAGGAACCTTACTTGGTCCATAAGGTAAACAGTCTTATTTCTGACTATCAAGGAGA
GAAATAACAGAGGCCATTATCATCTTTCATGGTGTCACTTTTGAAAACTGGTCTCTGTAGATCTTTCAGA
TTCTTGCGTTAGTCCATTGCTATGCTATAACAAAAATTGCATAGACAGCATGGCTTATAAATAACAGAAA
TGTAATTTCTGACAGTTCTGAAGGCTAGAAAGTCAAAAGATTAAAGACACTGGCTGATTTGGTGTCTGGCGA
AGGCCCATTTGCTCATAGATGGACGATGACCTTTTCACTCTGTCTGCACATGGCAGAGGGCAAGAGAGC
TCTCTGGGTCTTTTATAAGGCGCACTAATCTCATTTTGGAGGACCTTGCCCTCATTAATCACCT
CCCAAGGCACTGTCTCCAATACCATCACCTTGAGGTTAGGATTTCAACATATGATTTTGGGGGAC
AGAAACACGCGAGTCCATCTCGCTTGTCCACTCCATGGTGGTATCTTGTCTGGATCAGTTTCTCTCTGG
GGTGCAATTTGTGTTCCATGTCTAACTTGCAAGTTATAGCAGGCCCGATAGCAAAAGTATTCCAATGTTGG
TATGCAGAGGCATTGAATAATCAGAAATGAACCCACGCCATAAACAACTGGTAGAGCTGCAGAGAGTACC
AGCTGATTATAGCCCTGGGTAACAGTGGTTTTTTAGTTCCCTATGTCCGTGAGCCCTTTTCTCCCATAGT
AGCCCCACTGTGTTGAAGTGGCTGAATCGACAGAAAGCTTCCAGCTTGGGCCACATGCTCATGGAACCAA
TTCTCCTTATGAGCCGTACAGAGCTGGGTTGCCATTCTGGATACCTCTTCTTCAAGAGATTTTATTT
TCAAGGATATTTTCTTTTATCAACTACAGGGATTTATTTAGAACTTTAGGGCAGTGGTGCCCAACCTT
TTTGGCCCCAGGACAGGTTTTGTGGGAGACAAATTTTCCATGGACCAGTGTGAGGGGCTGGGAGGCA
TGGTTTTGGGATGAGTCAAGTACATTACGTTTGTGTATACCTTATTTCTATTTATTTATTTATTTGTAAT
ATATAATGAAATAATTACACAACTCACCAATAATGTAGGAATCAGTGGGAGCCCTAAGTTTGTCTTCCCT
GCAACTAGACAGTCCCATCTGGGGCAATGGAGATAGTGACAGATCATCAAGCATTAGATTCTCATAA
GGAGTGTCTAGATCCCGGCATGTGCAGTTCACAATAGGATTTGCTCACCTATGAGAACTCTAAT
GCCACTGCTGATCTGACAGGAGGTGGAGCTCGGGCAGTAATCGGAGGTTGGGAGCAGCTGTCAATAT
AGATGAAGCTTTGCTCGCTCGCTGCCACTCACCTCCTGTGTGTGTCCACTTCTTAACAGGTACACAG
ACTGGTACTGCTCCATGGCCAGGGAGTTGGACCCCTGTCTTAGGGAGTAGGGGTGGAGTTCCCTTCACT
TCTAGAAGGCCCTGGATTAGTATCCAGAGCTGTCTATACAGAGTATCACAACCAGGTGGCTAAAAAC
AGACATGAATTTCTCTTATTTTGTATGGCTTGGAAAGTCCAAAGTCAAGGTGCTGCCAGGGCCATGCTC
CCTCTGAAATGTAGGGGAGAAATCCTTCTCTCTCTTCTAGCTTCTGGTGGTTTGTGGCAATCACT
GGCATCGCTTGGCTTGCAGCACTTCAACATCTGCCCTTTACTGTCTCATAGTGTCTCTCCCTCATGTCTC
CAGGTCTCTCTCTCTCTTTGTATAAGGAAACTAGTCATATTGGATTAAAGGGCCCAACCTTACTCT
AGTATGACCTCATCTTAAGGTCACATGCAATGACTATTTCCAGATAAGGTACATTTCTGAAGAACTGGGA

O

FIG. 16A(15)

O



09/08/552 . 122702

168/223

O

GTAGGACTTCATATCTTTTGAAGGAACACAGTTCAACCAATAACAGCCCCCTGTACTGTTTACAAATA
GGTATTCCTCTCCTTCCCAAAGTTCTTCATAGCAGAGACAACTTGACCAAAAGGCAAAATACCTTATT
ATGTAACCTTAACCTAGGATCATAGATCCCTACTTGTCTGGTCTTTTATAAGCCACAGAACCCCGG
GAAATCATTTAAGACAAAGGAAGGCCAAGTGCAGTGGTTCAATGCCTGTAAATCCCAGCACTTTGGGAA
ATTAGGCGAGTGGATCACCTGAAGTCAAGAGTTTGAGACCAAACTGACCAGCATGACAGAACCCCATC
TTTACTAAAAATACAAAAATTAGTTGGCATGGTGGCATGTGCCTGTAATCCCAGCTACTCAAAAGACT
GAGGAGGAAAAATCACTTGAACCGAGGATGCCAAGATAGCAGTGAGCCAAATATCGTGCCACTGCACCTCC
AGTCTGGATGATAGAGCAAGATCCTGTCTCAAAAAATTAATAAATAAATAAAGACAAGGAAAGCCTT
TTCCAAGGAGACCCTTCTGCTTTGCTAGTTTCAGAGAACTTCTTTGGAGAAAAACAACACCCAGTCCA
TTAGCAGCAACGTCAGGGATTGAATTCTTAGGCGACGAGGCTGGGCACAGTGGCTCATGCCGTGTAATCC
CAGTACTTTGGAGGCTGAGATGGGTGGATCACTTGACATCAGGTGTTGAGACCAAGCCTGGCCCAACAT
GGTGAAAACTCATCTACAAAAAATATGAAAAAATAAAGCTGGGTGTGTTGGCTTATGCCCTGTA
GTCTCAGCTACCTGGAGGCTGAAGCAGGAGATCACTTGAACCCGGGAGTTGGAGTTGCAGTGAGCT
GAGATTGCCCCTACTGTACTCCAACCTGGGTGACAGAGAGACTCCATCTCAAAAAATAAAGAAATCT
TCGGCAGCAGTCTTCCCTCCACCTCATAGACCATGGAGGTGAGCCAGCTCTGACAAACCATGAGAAACA
ATGGCAGAGACATACCTGTAACTGACTGGGCAAGACAAAGGTGAGGAAAAATGACAAGTTTGA
GGAATATGAGACCAGGAGTGGGAACACCACTAGCAGAAATGATGGAAGTTCTCAAGAATAACAACA
GAGAAATAGACCATGGCCAGAGTCTAGAACCTCCAGGGAAGAGATGGGTCCAGAGGCGAGAGAGG
ACGTTGAAGGGAATGGGAGTGGTGAAATATATAGACGATGGGACCAACCCAGAGCAGTCGCTATTG
CAAACTGAGGAGAGGAGTCTGGAGGGGTGGTGGGAAGCTGGTCTCCTAAGGAGGTTTGGACAA
AAGCAGTCATGGAGCGGCTTAGAAATCACAGTTGGGACAGGTAAGTTCTCGGGATATAGAGGAT
GAGATTAGAAGAGGTTCCAACTAGGAGTGTGGAGAAAGCACTATTGACCCAAAAGGAAGGAGAAAT
GTGGGTGGAAGTGGCAGAGAAAGAGGGGTTTGAGCAGAGAGTGGTGATTTTCTAATGCAGAGTTGTGG
GAGGTGGAGTGCAGGAGCCAGGCTGGGTGGCTGTCTGATGTGATTAAGCACTTACTGACTGCCAGGC
AATGGGCTAAGTACCTGAGATGCTTTGTCTGTTATCCCTCCCGAAACCCCTCTGAGCAGGTGCAGTTAT
TATTCTCACTTCACAGATAAGGAAATTGAGGCACAGAGAATTGAGTAACCTACCCAAAGGTGACATAGCT
CATATATGTTAAAGCAGGCTTTGAACTCAGTCTAGTCCCGAACCTAAGCTTGTAACTACTATGCTTTT
CCCCAAAAAGGGGCTGGCACAAAAAGAGCTGAGGGGGGCTGGGCATGGTGGCTCATGCTGTAAATCC
CAGCACTTCGGGAGACTGAGGCAGGTGGTTCAACAGAGGTCAGGAGTTTCAGACCCAGCCTGGTCAACAT
GGTGAAGCCCTGTCTCTACTAAAAATACAAAAATTAGCTGGGTGTGGTGTGACCCCTGTAGTCCCAG
CTACTTTGGGAGGCTGAGGCAGGAGAAATCGCTTGAACCCAGAGCGGATGTTGTAGTGAGCCAAAGATC

P

FIG. 16A(16)

P



007200552 . 422702

170/223

Q

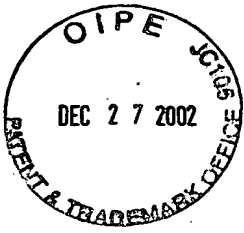
AATCTTAAATGTACCTCCAAGAAAAAAGCTGTCAAAGTGACATTTAGTAGTAGAGTCACATCTCTAAG
GCCTTTGCTTCTCCTTCTGAGTTCTTATCATCTTTGAAGTTATGTATCATGCTGACTTCAAATCACTTT
TAAATATTATATGGCTTCTTTAAATGTAGTTCTGAAGTGAGGGCTTTATCTTTCTTTGCTCCAG
ATTTTCTACCGCGTCATTACCAAGCATCTTAAACAACCTAAACAAAAAATCTTCTTGACCTG
GTTTTCCCACTAGCTAACATCCTATTTTATCTTTCCCTTTGCACCTAAAGGTTTTTAAACGGATCTTT
ATACCTCTGTCTCCATTTTCTCATCTGCTAACTTATATGGCAAAGATTACCACTGCCTTTCAACATAA
TTGGCCAATCTACAGAAAGTTTCAAGTTCTCTTTTAAATTGACCACCTCTGCTGCTACCTCCCCACCTT
TGACATCTTGCTTCTCACTTGGCACCTTACCCAGTGTCAAGATTCCCTCCTTTAGGATGTCTTCAGAG
CAGCTACACAGTTGGTACTATAATTTATACATCCTTGACACAGGGCTTGCTGGGATATTGATGGAGAG
AAGGAGGAAACTGGAAGTAGTTCAAGGCCAGAGCTAGGGAATTGACCCATCTCCAGGTCTCAGGTCTGC
AAGGGAGCTCACAGCTTAACACATGGAGCTAGAACTTGTGCTGGACCTTGACCAACACAGCCCAT
GGAGTCCAATACAGTGCTCAATAGGGATTTCAGGAAATTGCTATATTTATTCAAAGAGAACTTACCAA
GTGTCAGCTACGTGTTGGCATTTGTGTAGSCACAGGGACCACAAAGATAAGACATTGTAGCTTTCCCTT
AAGTTGCTCACTGAGTAAATAGAGACAGACAGAAAGGTAAACAGGTAAGTGCAAAAATACATACAATTCTG
CAATAGTTTCATAGTGGCTATGGAGAGAACGCTCACTAATCTTGTGTTAAACAGTTGTTCTTCAAGGA
TTTGACATGGATTTGATTGGAAGCATGATACCATTTTTGCAATTAACACACAGGAATACATAAATAA
AATGCATCAGTATTTTACAAATAGCTACTAAGAGCTACTAGAAAACCTGGGAATCTTAAACCTTA
CCATGCTACTTGCTCTAAATATTTTATTTTATGTTATTTGTACATTTCTTTACCTACACAAACCCA
CTGTTTCTTCACTTCTTAGTCTATTTAAACCTCACACCTTTTCAGCATCTCTTAATTTTACTACCA
TCTGTTAGTTCTCCTGTCTGAATGAAACAAAAATGGCAGATGTAAACGAGGGCGAACAGATTTTIG
ACAGGAAGTATTCAGAGGTAGAAGGAAATAGTCAAGACACATATGATAAACGAAAAACAATAAATCTT
ATACATAACAACCTTATAGACACATTTAAAGTTTAAAGATCTCAAGAGCTATGTCTGAATAGATAGAAG
TAAAAACTCTATTAAGTAATTAGGAAAAATAACAAGAACAGTGAATTTCTTAATGAATGGCATGTAATCA
AACTGTACTTATCGTCTAATTCATAATCTTGAATGTTTTTATTTTATTTTATTTTATTTTATTTT
GAGACAGAGTCTTGCTCTGTCACCCAGGCTAGAGTACAGTGGGCTGATCTCAGCTCACTGCAACCTCCA
CCTCCAGGTTCAAGCGATTCTGCTGCCTCAGCTCCTGAGTAGCTGGGATTACAGAGGCTGCCACTG
CACCCGGCTAATTTCTGTATTTTAGTAGAGATGGGTTTCAACATCTTGCCAGGCTGGTCTTGAACT
CCTGACCTCATGATCCACCGCTTGCCCTCCCAAAGTGTGGGATTACAGGCGTGAGCCACCCACGCTT
GGTCGAATGTTTTTATTATTGAAGAGACAACATGGGCTTAAATCTGTCTCTCTATTGACAGACTTTG
ATGGAGTCAATCCCAATGCTGCCACTTACTGAACGGCTTAAATGACTTAGTCTCTCAGCTGTCTT
TCTGCATATGTAAGGTGGAATAATGATGGCTTCAAGGAGGAATAAACCTATGAAAAGTGTGAGGATAG

Q

R

R

FIG. 16A(18)



09724552 . 122706

171/223

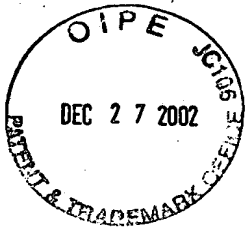
R

TGCTGATGAAATAAGGATTCAACAAGTAGTAGCTGCTATTGAAGATTAAAGAGTTATTATTATACAA
CTATTTAATAAATTTTAAATACTAATACTAAATATTAAAGAGCTTTGAAATGGCCAGCGCAG
TAGCTCCCTGCTGTAATCCCAACACTTTGGGAGGCCAAGTGGGGGATCACCTGAGGTGAGGATTTA
AGACCAGCCTGGCCAAACATGTTGAAACCTGTCTCTACTAATAAACGCAAAATTAGCCAGGTGGTGG
CATGCACCTGTAGTCCCAACTACTCAGGAGGTTGAGGAGGAGAAATGCTTGAACCTAGGAGCTGGAGG
TTGCAGTGACCCGAGATGTCACCTGCACTCCAGCCTGGCAACAGAGCAAGACTCCATAAGACAAACAAA
GCTTTGAAATTTGTAAATGAGTTGTACCTATCTTCATTTAAGAAATTCATCTTTGTTTCATCTATTTT
ACTTGACATGAGAGCTTCCAGCAATTTTAATTAAGCCCTCACAGATTTTATGTCACCTGGCTATGTGAT
AAACAAATTTTGTCTAAATAATATTCTTGCTTCTTTTAAAGGAATGTCTCCCTAGAAACGGTTTG
TACCAACAATACACTGACTTTACACAAATCAGATCTGATTGGCAACAGTTGCAGATGTTTTCAAAGG
ATTTTCATTTGAGAAAGGGCCCATTTGGGTTATTAGATTCTAAGAACTGAAACTGCTTTGTTCTGTTT
TTCTGGCTTCTGGGAGAGGAGAGACATGAATTCAGTTAGCACCTTGATTTTCTTTATCCTTCATTT
CAATACAGAGATGCTTCATATGCACAGTGGTGTGAGTCACTCAATCAAAAGAAAGAGAAACAGTTTCTTG
GTTTTTAATTTCAACCGGAAAGGAAGGACCCCATTTTGTTCGGCTCTAATTAGCCAGTGCATGACTT
AGAGCAGGAGATGCTTTGAAGCGGTGTAACACAGGTCTTCATTAATCTCCACGAGGACTTGCAC
TTCTACTATGCCTAGCTGAAGAAATGGCTCAGGAAGATGAACAATCTCACAGAGCCCTAACATACTG
AAGCCAGGTGTTATAAGCACAAGTCAAGAGGTTGAGAAACTAACGTTCTTGAAATCTCCACTTCTTT
CTACGTCAGAAAGCCAAAGCTGATTATTTTAGTTGGAATTTAGAAATTTTAAATAATTTCTAAAGTC
ATGAACAAGCCTAATTAAGAATAGTTGCTGTGAAGGTGCTGAATAAATCTCGATTTTACCAACCCCT
CTTCTGGAGGAAGCCAGATGGAATCCTGTAGAATGTTCACTTACCAACGAACTCTTGTCTTTCTAAT
GAGGAACAGAGGCCACAGTAGTAACTATCTTAACCAAGACAAATGACTAGTCTGCTGCTCCTTTT
ATTAAGCACTAAATTTTGATCCAAATAAATCTGTCCAGTAGAAGGATTTCCCTAATGTACTGGTT
CTAACTTGTCCCTTCAAGGGCCAGTGTCCCGTACACATAGCTAAATGGGACTTCTCTTCAACTACCA
TTACCCAGAGGCGAGAACCTAAATGCTGTGAATGACATCTGCTGTTTCACTCTCAGCAGCAGTGTG
CATTTGAGCTTCTGAGGGCCACCCAGGACCTATATCTGCTCAGATGTTTAACTCATCTAATTCAGTGA
ACACTTCATTTCTAGTTAACTGAACATCTACTTTGTACAAGGCACTACAGCGGTTACAGATGAATAAAA
TCATGAGATTCCACTGTCTCTATATAAACCATCACTTTGGGAAATTTTAGAAATGTGGTAAAGTCCAGG
GCTTCCCTGAGCGTAGAGTCACAAACTCAATGCCTGCAGAGGCCAGCTGACAAACATAAGTAAATGA
TTCTGGCTGGCGGAAACAATTACGGGTGGTGGGTTTCCAGCTGGGAGTGCACGCTGTGTTAAAG
GACAGCTGCTACTCATTTCCAGCCCAACTGTGTTCCCATGTAGAACTGCGGCCAGTGTAGCCAGTACCG
AAGATTTCTCAGAAAAAGCCGGAGATCTCAATGTTAGTGAATAATCTCTCAAAATTTCCAAAGAGGATTAT

S

FIG. 16A(19)

S



09720552.122702

172/223

S

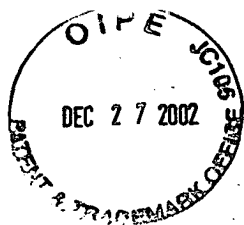
ATGGGGCAAAGGTTCTCAGATCAGTTTGCAGTCTCTTACTTAGCCCATGTGCAGAGCAGTCGTAGAGGG
TAGCATGCAGTGTCTACATAATAATCTTTTATTTATTTATTTATGCTTCTCCTTCTCTCTCTCTCT
TTAACCTTTCTTCTTCCCTCAGGCTGGCTTCTTCCCTCAGCTCGTCCGACCCAGCCTGGGTTCAATG
AACATTCGGTAAGGAACACGGAAATGTCAAGCGCATTAGAGACAACCTTGAGACACATTCCTCTTGCGG
TAAGCACTTCACTGTAGATTTTAAATTTAAACAAGACAATGTTTACGACTTGCTTCTTTCAGGGAAGA
GCGATATCAATTTTAGTGAACACTTCAAGGCTGAGATACGCTAGGAGAGTCGTGTGTTGCACAGCA
AAGAAATCCACTTTGAAGCGAGTGGGAAAAAAGCATCAATGCCACATGTAACCTACCGCCTGAAGGG
TTACATTTGGTATGAAACCTGGGTTTAAAAAGGGACCGAATAGACTAGCCATTAAAGACCTGCGTACAA
CCTCTCTCTCTCTTTGAGAGATAATGTATCTGGACAATAAACATGAACAGAGTGGAGTCTATCCTGT
TTAAACATTTGCCCTACTGTACAGGCACCCAGGAGCTGAAGGTCAGAATATTAGCAGTGGGAGCTTGATT
AGAAGTTGATGAGAGATGGGTAGTAGGAGGAAAGAGTGAGATAGAGGAAGAGACATGGGGTTACCCG
TAAGTGGAGAGTAGAAAAGTAGAATCAGCTGGCCATCAAAGGGCTGGGACTGAGGAACAGTATGGCAT
GTATTAATATACTAAGCGCTGACATTTGGAGGAGAACTAGGAAGGTAAATGAAATCAATAGGGGATGAT
GGAGAAATAGTTAGGTGTGCAGGGATTAGGGTTATGATAGAAATACATGTGAATACATGCAGTATTGTCC
TGGAAAATGGTTAACAGTTGGTTCTCTGGGGGTGAGGGGAGCCCTGATTTGTAATATTTGCCTATT
TCTGTGTGCAATACTCCACCATGACCACTTCAAGCTATGAATGTGAATCACAAAAGCAGGTTGGG
AGGAGATGCGCACATTTGTTCCCGGCAAGGTGGAAGGTAAAGGTAAGTGAATCAACAAGGTCAAAGAA
AACTCAAGATTTTCGAGGTGCCTCAGGTCTGAGGGCAATGAAGTCTAGGAATGGCTGTGCTGAGGTAGC
TGAAATAGAAGTGACTGCAGAGGTGATGAAGCTGAAGAGGTGAAAACAGAAAATTAGAAAGGCAAAACCCC
CACCGCCCAACCCCTGCAGCCAGTTTCTGAGGGTGACAATAGAGGAAGGTTGGAGATGGAGT
TCAGGTCCAGAAGCCATAGAAGCGAGTGTGACATTTGCTCAAGGTCAAGCATGTGAGTGTGGGGTGT
CACATGCTGTTGTGAACCATCATTTATCAACCAATTTATGGAAGACCTCCTATGGGCATCTTGCCATATGC
ATTATAAGATGTGTAAGAAAGACATTTCCCTCCACTTGGTGAGGAGAATTAGGGCTGTACACAGATACT
GTAGAGTGCCATGTGCCTGGTACAGATAAGGTGTGTTAGAGGTTAAAAGATGAGGCTCTTAATATTAAAT
GATAGATCCCACTTACCTGAGTCTGACTTACAAATGTGCTAGCATTAAGTGTGTTTACCTGCATTCCTCT
TGACCTTCAGAACAAACCCATTTTACAGATAGGAAATTTGGGTGAGAAAGTTTCAGTAACCTTATCCAAAG
TCACACAATTTGGCAAGTCCAGAGCTGAGCCAGGAACTGAGGTCTCTTAACACCAACAGCTTGCTC
CCCAATCACTGTGCTATTTTCCCTCCCCAGAAAGATAATACTCTGATGGAATGAAGGATAGTGTAAATA
GGAGATTCGGTGTCCCTTTTAAAAAATAATTCAGCTTGCATATTCCTAAAGAGTCAATTGATGTTTA
AAAAAATTTCCCTTGTGCTGACATGTATTTTATAGGATCTGCTGTAGCAAGTGTATTTTG
TGTGATTGAGTGGGAGAGTGGGAAAAGTTTTCAGAGAGCTGTTGAAGCCAGAAATGCAGGGGGCTGCGCA

T

FIG. 16A(20)

T

09728592 122702



09728552 . 122702

174/223

U

CACAGAGGCAGGATTGCTTATTAGTCTTCAAGATGAGGTATTTGCTAAATGAATGAGACAAAGGGATT
GGGGCCACATTACAGGAAATTGAGGTATGTAATAGCCTGGTGCAAGTTAAGAGTGTGGACTCTGAAACC
AGACTCAGCCTGGAATTGAATCCTGGCTGTGTGATGTTGGCCAGTGACTTAACCTCTCTGTGCTTTTA
TTCACCTCTTATATAAATGGGATATAATAAACCTACCTTATAAGGTTATATAAGAGTCAGTAAATA
TAAATAAGAGTTTTTGGATGATGACTAGCACAGAGTAACACTTGTGCCATTATTTTATTACTT
GACTAAATAATACCAAAAAGACCATCCAAGAAAAGCCTTTAAGCTGCTAGTGCAGAAAGATTCCCTT
GTGTTGTGTGCTGGGGGTGAGTGGTGCCTGTGGCCCACTGGAGAGGAGACAGCTATGGCTGGAGTGA
TTCTCAAACTTCAGAATGCTAAAATCATCATGACATGGACAACCTTATTAAAGAAAAGCAAAATGCCCTGGCTC
CATCCTCAGAGAGTCTCATTTCACTGGGTGAGGATAGAGCCCAAGGAATCTTTACCTTAAAGAACCATCCC
ACCTCCCACTCATATGATCCTTATGCAGGTGATCTGGGGGCCACACTTTGAGAAATAGACTCAGGTC
AAAGTGGGCTCTAACTGCATCTCATTTCTTACCTGGCATATCTAATAGTAGAGAAAGACAAATGCTAA
GATTTTGTGGAGATCTTTTGTGGGATGCKGSTGTCAYYCAKTCAYTCATTTAYYTAWWTAWKTAK
TYAWTKTGAACACAGAGTCWCAYYYTTGTCACCCRGMWGGAGGCGAGTGGCACAATCTGAGCTCACTGCA
GCCTCAGGCTCCTGGGTTCAATCGATTCTCTTGCCTCAGCCTCCCGAGTAGCTGGGATTACAGTCATGC
ACCACACGCCCAACTAATTTCTGTATTTTGTAGTAGTGACAGCGTTTCACCATGTTAGCTAGACTGGTC
TCGAACTCCTGACATCAGGTAATCTGCCTGCCTCGCCTCTCAAAATTAGTAGCTGCAATTACACGTGT
GAGCTGCCGTGCCCTGGCTGCTGTTCTTTTAGTTGGCCTCTTCTGTAATAGAGTGTGAGAAATCTGA
CTTGCTGCAACAGCTGCTTTGAAGCAGGCTGTGTTTACACTGGTCAGATGTGGAATTTGTGGGGCACA
CTTAGCAGCTTCCCTCTCTAATTTTCTGTATTTTJAGGAGAAACAATTTTAAAAAATTTAATAAAAAATG
CCTTAAAAAATTAACATTATATAAGATGAATCCCATTTTCTAATCTTGTAAATTAATAAACAAATCATAA
GCATATGAGCACCTGCACCTAGGGAATCAAGGTGGCAAGCTAAACACTTCCAGCTCTAGGTGATTCCG
GGCAATACAAATGGAGCTGGACTTTGGCCACAGTGCAAAAATATTGATCTGTTGTAGATGCTCTGAAG
TTTCCACAAAGAAATTGGTCTGCTGTGCTTCAAGTGTGCTTAAAGGGAAGTGGTTCCCTCAAAATGTTAG
TTTTTAAGCCAGCTTTCTTAAATAGGAAGATTCTAATAGTAGCAAAAATATAAACTGCTTCTAGGTTT
AAAAAGGACCAGCACACATGTTATCACACACCTTTCTCCTCAGGTGATGAGTGGATGAGTGGCCTGG
TGATTTTCATAACATCTCCAGGTCCTCAATGCTAAAGCAATGCTGAAAGATACCATGTGTACCGGA
ACCTTGAGAGGATTTTGTGGCATAAAAAGAAATATTGATCATCTATAGTAAAAATGGTTCTACTTT
AATACTACTGAGAAAAGATTTTCTTTCCAGATCTACATCTCTGAATCTTCAATGAAGACAAAGATCCCT
AACTTCCACTAACACCATATGTGTGCTGCTCTTTGTAATGTAGTCCACAGATCTCATAAACTGTGAG
AAATAGCAGAGATTGTAAGGTCACTCCACTTCCCTGTAAAGGCTGCGTCCCTCACTTACATCCCTAATA
ACGTCCTCTAACCTCTGCTGGAGGCGAGATTAGCTGCCAGCTGGGAAGAGCTCTGCCCTAGTCAACAT

U

V

V

FIG. 16A(22)



09/28/52 . 122702

175/223

V
TTTTATCTGTGGCTTTCAGATGAGAACACTGGATGCTTATCTGAAAAAAGCTCCTCAGGCTGGAGGGAG
GGATTGGCTCTAACAAAGATGCAATGTGATAAGATAAAGCGAAGCCAAACTCTAGGCCCAAAGGCTCT
AGCAACACACTTTTGAGAACCTTGAGACGAGTTTGGCTGATGCGAGCTTCTCCGCTGCTAAAGTAG
CCCATTCATTTGGACGGCTTAGAGGCTGGCATGTTCTTCTCCACGTTGTGTTAAAGTACTCCAGTTT
CTTCTGCCATGAACGGCATGCCCTGGCTCCTCCTACCTTCCCCACTTAAAGTCTTCCCTCCCTCCCT
CTGACCTTCCCATTCAGCCACACTGGCTTTTGTCTGGTCTTAACAACCAATGCTTCTGCTCCCTCCA
AGCCCTACACCTGCTATCCATCCCTCTGTCTGAGAGACACTCCACCCCTTACAAAGCCTGTTTCTCA
TCCTTCCAGTTCAGATGTCTTCTCAGCTTGCCTCAACTGACCTCTTTCAGCTATTCTCACTCTTTGTAC
TCTGTTCAATTCCTTCCGAGTCAACATAATTTATCTTATTTGAATCAATTTCTTAGTTGTATTAT
TTAGTTATTTGCACACTCTGTCTCTGTGGCTTTTCTTATTCAGTGCAGGCTTTCTTATGTAAGTAAT
TATTTACTTAAATTTTAAAAATAATTTCAACTTTTGGCCGGCCACAGTGGCTCACGCTGTAATCCCA
GCACCTTTGGGAGGCGGAGGTGGTAGATCAGCTGAGGTGAGGATTCGAGACAGCCTGGCCAAACA"GG
TGAAATCCCATCTCTATTTAAAAATACAAAAACTAGCCGGCGTGGTGTATGCACCTGTAATCCAGCT
ACTCGGAGGTTGAGGAGGAGATCACTTGAACCGGGGAGGTGGAGTTGCAGTGAGTGCAGTACCG
CCATTGCACTCCAGCCTGGGCGACGAGAGTGAGACTTCACTCAAAAAACAAAAACAAAAACCCCT
GCTTTTCAGAGGGCTGAACATAATTTACATTTCTACCAATAGTGTATAAGCATTTCCCTTTCTCTACAG
CCTCACTAGCATTTACTTTTAAAAAAACTTTTAAATAATAGCCATTTCTGACTGGTATGAGATGGTATC
TCCTTGTGGTTTTCACCTGCAATTTCTGTATGATTAGTATGATATTGAGCATTTGTTTATGTTTGTGGCT
GTTCGTATGCTCTTTTGAGAAAGTGTCTTTTCATATATTCTGCCCCATTTTGAATGGAGTTGTTTG
TGCTTGTGAATTAAGTTCCTTATAGATTCTAGATAATTAGACTTTTGTGGATGCATAGTTTGTGAATA
TTTTCTCCCATCCATAGTTCTGTTTACTCTGTGTAGATTCTCTGTTTGTATGTTTGTGTTTGTG
TGACAGAAAGCTGTTAATCTAATTTGGTCCCACTTGTCAATTTTGTGTTTGTGCAATGGCTTTTGAA
TTTTAATAATAAATCTTTCCTAAGGCTGATGCCAGAACAGCATTTTCTAGGTTTCTTCTAGGATTC
TTATAGTTCAAAGTCTTATATTTAAGCTTTTAAATCCACCTCAAGTTAATTTTATATATAGTGAATGC
AGGGTCCCTGTTTCATTTCTTGTGATGTGGCCAGCCAGCAATCCAGAACCATTTTATGAATAAGGAAT
CTTTTCTCATTTGCTTATTTTGTCAACTTTGTCAAGATCGGATGACTGAGGAGTGTGGCTTTTCTG
GGTATCTACTCTGTACATTTGGTCTATGTGTCTGTTTGTATCAGTATCATGCTGTTTGTGTTACTA
TGGTCTCATACATAGTTTAAAGTTGGATAATGTTATGCCCTCTGCTTTGCTGTTTGTGTTAAGATTC
TTTGGCTATTGAGGCTCTTTTTCACCTTCATATGAATTTTAGAATAGTTTTTCTAATTTCTTTGAAAAA
TGACCTTGGCAGTTTGATAGGAATAGCATTGAATCTATAGATTGCTTTGGGCAGTATGCTATTTTAAATG
ATATTGATTCTTCCATCCATGAGCATGGAATATTTTCCATTTGTTGTGTCATCTACTATTTCCCTT

W

FIG. 16A(23)



0972055P.122702

176/223

W

AGCAATGTTTTTTAGTTTTCTCTGTAGAGATCCTCCTAGGTATTTTCATTTTTTATGTGACTATTTTAAAT
TGGGATTGCATTTCTTCATGTGGCTCTCAGCTTGAATGTTATTTGGTGATAGAAATGCTACAGAGTTTGT
TACACTGATTTCTGTATCCTGAAACCTTACTGAATCATTTATCAGTTCTAGGAGCCTTTGGCAAGTCT
GTAGTGTTTTTCTAGGTATAGAAATCATATCATTAGCAAGAAAGATAGTTGACTTCTTCTTTTCCCTATT
TGAATGCCCTTTTATTTCTTTCCCTGTCTGATTTGCTCTTCCAGTACTAGTTGAATAGGAGTGTGAGA
GTGAGCATCCTTGTCTTTGTTCCACCTCTCAAGGGAAATGGTTCCAGCTTTTGGCCCATTTCAATATGATGT
TGGCCATGGGTTTGTACAGATGGCTCTTATTTATTTGAGGTGATTTCTTTGATGCTAGTTTGTCAA
AGGCTTTATCATGAAGGGATGTTGGATTTTATGAAGCTTTTCTGGTCTTATTTGGTGAATTGCA
TTTATTGAATTTGTGCATGTTGAGCCAACTTCCATCCAGGGATTAAACCTACTTAATCATGGTGTAA
CTTTTGTGATGTGCTGCTGGATTTGGTTGCTAAATTTTTTTTTTTTTTAAATGGATTCTCCCTCTGT
CCCCAGGCTGGATTGCAGTGGTGTGATCTTGGCTCACTGCAAGCTCCACCTCCCGATTTCATGCCCAT
CTCCTGCCCTCAGCCTCCCGATTAGCTGGGACTACAGGCACCCGCTACCATACCCAGCTAATTTTGTAT
TTTTTAGTAAACAGGATTTCCACCATGTTAGCCAGGATGGTCTTGATCTCCTGACCTCGTGAATGCTGCC
TGCCCTCAGCCTCCCAAAGTGGCTAGTATTTTTTTTAAATTAATTTTCTCACCCTTGCTGCCATCTTA
TGATTTTCTAGTATTTTGTGAAGATTTTGTGCATCTATTTTTCATCAGGGATATTGGCCTGTAATTTTCT
TTTTTCATTTTCATCTTTACCACATTTTGTATCAGGTTTCATCTGGCTTCATAGAAATGAGTTCAGGAAT
GGTCCCTCCTCCTCGAATTTTCTCTGTAGAATTAGTACCAGCTCTTTGTGTCTGGGAGAAATTTGTAT
GCCAATAATTTAAATGCAGTTAATATTTACTGGACAATTTCTCCAGATAATTTGTATATGATTTTGTGT
CCACCTGAGTTGATACATGATTTTAAATTTATGATCATGTTATGAAAGAGCAAGAGTATTTGGTCACT
AGTCTTGCCCTATAGATGTGCCTAATGATTCAAAGTAGATATTTTGGAGCCTAACAGGTGCCGTGACTA
GGCAGTTTTTTTTTTTTTTTGGACAGAGTCTCGTTATGCTGCCCCAGGCTGGAGTGCAGTGGCA
TGATCTCGGCTCACTGCAACATCCGCCCTCCTGGTTCAAGCAATTTACTGCTCAGCCTCCCCAGTAG
CTGGACTACAGGCTCAGGCCACCCAGCCTGGCTAATTTTGTATTTTGTAGTAGAGATGGGTTTTCACC
ATATTGGCCAGGCTGGTGTGAATCCTGGCTCATGATCCACCCGCTCGGCTCCCAATGTGCTGGG
CTTACAGGCGTGAGCCACCCGAGATTTAGGCAATTTTATATTTCCCAATATCCAACTCTTCTGA
CCCCCTTCTCAGCCTGGTGTATCAGGCACAGGCTGTTTCAAGATTATGTTGCTCTGAAGATATGGC
TCTCCAGGTTGACAATGTGATAAGGATTCACCTGGTTTAGGATTTACACATTCGCCCTGAATGTCTG
TTGCATCAAGTAGACAGTCCATCCCACTTGGCCATTTGGTCAGAGCTGAAGGAGACAAAGGAGTGGG
CAGCCGCTGTGAACTGCTTGGACAAAGACTGCCAATAGCTATCAGACAGTGTAAACACAGCTGA
TTTAGGTTTGAAGGGGCAGTCTCTTGGGCCACTTACTATGCTGCATCATCTCTTTGGAAATGCTCT
TCAGGTAACCTGCCTAACAGACTGAGAAATAATAATGCTCACAGAGAAAAAGACCCCGGAAAGTCTGACT

X

FIG. 16A(24)

X



09720552.122702

177/223

X

TCTCAGAGCTCAGTGTTAGGTGCAGAACTGGATTGTGAAAGGATTTTAAATTTTTTATATTCATTGC
AGGGAACATTCAATTATCCATCCTTCTCCACTCCACCTGTCTGTGTTGTCTTTGTCTCTCTCCC
CACCTCTCTCTAGAC
AC
GAGAGAAAGCCTCAATCTGAGGAAGCTGTGCTGACTAGCCTTGCTCTTAATCATGGAGACAAATGCTTT
ATGCTTTATCTTTGCACAGCTGAAAGCCATGGCAGAAGCAGTCTCTAAACGAAATAAATAAGAAAGG
TTCTCTGCTAAGCCCTGGCAATGCAGCCTTCTATCCCTCCCCAACACTCACAGCTTCTGAGCAAGATG
TAGCTGCCCTCCAGGAGGCTGGTGATGGGCAATAATGAGCAGAGCCACGTGAAGGAAAGATGGGTGAA
GAAATGTGTGTGAGGTCATGCTGGCTGCACTGACCATGAAACAAAGGATCTACCCCTCTAGTAACTGC
CCTACTCCTTTGGTAACTGTTCTGAAATTATAACTTGCCAGAAGTTCAGAAGGACCTAGTGCAGGTATT
AGAGGAAATTCGTAAGATTGAGCCATTATTCTCTGCACAGATACATAATAATGGACACGGGCCATGGTG
GCCAGCATCTTGCTCTTGACAAATGGTGAAGGAGGTTGTAGGTCAITGGCTATGCTCTCAGAAATTAT
AATGGAAGAAACAGCTCCTGAGTGTCTACTATGAGCCAAAGGCTGTGCTAAACACTTTACCATAATGAT
GACATCTTTTCTCACAGGTATCAAAAAACAATAGGACATACCGGATAGCTACAATCTTTGGGCCCCCTG
CAACACACAATAATGTGATTCTCTCTTCAATCCTACATATTGCTACAACTGTATCCCTGAGGCATA
TTCATTGTAAATAAACAATATAAAGTACTACTTTTGTGTTTGTGAGATGGAGTCTCGCTCTGTCAACC
AGACTGGAGTGCAATAGCATGATCGTGGCTCACTGCAACCCCTGCTCCTGGGCTCAAGTGATTCTCCT
GACTCAGCCTCTCAAGTAGCTGGGATTACAGGGCACGCCCCCATGCCCTGGCTAATTTTGTACTTTTA
ATAGAGACCAGGTTTCAACCATGTTGGCCAGGCTGGTCTCAAACTCCTGACCTCAAGTGATCCACCTGCC
TCGGCCCTTCCAAAGTGCTGGCATTACAGATGTGAGCCACTGCAACCCGCCCATATAAAGTACTACTAAT
GTAACAGGCTGCTAGTCCAGACAGTACCACACGCTGGTGTTCATTGAAGGCTGGACTAACAACTCCAGC
CTCTCCGCCATCACAGAGTGATGACTGCCCTTCCCTGAAGCAAAAGCTTCTGGTTCAAGGAAAGGCCAGTA
AGTGACTGCTCTTTGTTATACATGTTAGATGATCAGGCCCTCAAGAAAGTATAAAGAGATCTTTGTG
CTCTCTGGGACTCAAAAAGCTGCACCTCTTTGGGGAAGGATAGCCAGGTAAAAGTGGCCAGGTAAAAGA
GGGCTGTGACACCTGGTTCTGCAAGATGGTAGACACAAAAATGAGAGCCACATTTGGAGCTTATGTGC
CCCTAACTCTGTACATAACCTGCAAGATCTAATTACTAACAACTGGAATCTTGGAACACCTGTAGTAC
ATCCTTGGCTAAGGTTAGCCCCAACAGAGAGGCTCTCCTCTTACAGAGAACCATTAACATTTGTGCCCTT
CATCCTAGAGTAGAAAGGCATGATCAGACTACTAAAAAGACATCAGGAAAGGGCCCTGTGACATCTGAG
GGAAGTGGTTGCCCTCTCTGGGATGTTGGTTCTGGGAAGAGGGCCATGGAGGAGTGCCCTTTAGATGG
TCATTTCAGGAACCCAGGCTGATAGTGAGAGGTGAAGCCAGCTGGGCTTCTGGGCTAGGGGGGACTTGGGA
GAACTTTTGTGTAGCTAAAGGATTGTAATGCACCAATCAGCACTCTGTAAATGGACCAATCAGCA
CTCTGTAAATGGACCAATCAGCAGGATGTGGCAGGGCCAAATAAGGGAATAAAGCTGGCCACCAGA

Y

FIG. 16A(25)



09/20/52 . 12/2/02

178/223

Y

GCCAGCAGTGGCAAACCTGCTCAGGTCCCCTTCCACGGCTGTGGAAGCTTTGTTCTTTTGGCTCTTCACAAT
AAATCTTGCTGCTGCTCACTCTTTGGGTCTGCACTATCTTTATGAGCTGTAAACACTCACCGTGAGGGTC
TGTGGCTTCATTCTGAAGTCAGTGAGACCACAAACCCACTGGGAGGAACAACAACACTCTGGACACGCC
AACTTTAAGAGCTGTAAACATTCACTGCGAAGGTCTGGGGCTTCACTCTGAAGTCAGCGAGACTATGAA
CCCACTGGAAGGAAGAACTCCAGACACATCTGAACATCTGAAGGAAGAACTCCAGACACACCATCTT
TAAGAGCTGTAAACACTCACTGCAAGGGTCTGCGGCTTCACTTTTGAAGTCAGCAAGACCAAGAACCCAC
TGGGAAGAAACAATCCGGACACATTTTGGTGACCCAGATGGGACTATCACCAAGTGTGAGTACCATC
AACCCCTTTCACCTTGTTATTCTGTCTATTTTCTTAGAATTCGGGGCTAAATATTGGGCACCTGTC
AGCCAGTTAAAGCGACTAGCATGGCTGCCAGACTTAAGAGACTAAAGACACGGGTGTAGACTTTCTG
GGAAGGGCTCTTAATAACCCCAACTCTTTGGAGTTGGGAGCGTTGGTTGCTTGGAAACCAAGCTTCC
ACATTTCTGTACTTCTGGCTGAGACGAGGTCAACAGAGAGGAAGCCATTAGCTCTGGGGTCCCG
ACAGCAAGTTGGTTGACCCCTGTGGCCATGAACAGAACTCTCGAAGTCATGTTGCCCCAAGCGAGACTCAC
CCATCTATCCTATCTATCCTGACTCTTGCTTCTTGGTCTTAATGCCTGGAAGACAAAACTTCTCTTG
TCTCTGTTCTCCAAGGCTAGTCCCACTTCTAAAAACCACTCCCTGCTCTGCTGCTTTCTAGTTTCTC
CTATAAGAAATGATTCTAGTATAAACTCCAGGACTCTATTCTCTTTTAGGCACCCGGGCTCACCAAT
CAGAAAGCCATAAATTTTGGCCAAAGCCCCATCTTAGGGGGACTATCTGGAATTTTAGGATCCCTCCT
CAGACAAGCAGGCCCTAACAAAGCTATTCTGAAGCTAGGATATGGGAGCCTCAGAAATGATATCCTT
CCTATTCAAGTGAGGACAAAAGGCATCACTCTTCCAATCTGGAATCCCTTCCCTCCCTCAGGGTATG
GCCCTCCACTTCACTTTTGGGGCATAAAGTCTTTATAGGACACGGGTAAAGTCCCAATGCTAACAGGAG
AATGTTTAGGACTCTAACAGGTTTCAAGAATGTGTCGGTAAGGGCCACTAAATCCGATTTTCTCAGT
CCTCTTTGTGGTCTAGGAGGACAGGTAAGGTGCAGGTTTTCAAAAATGTGTTGTAAGGGCCACTAAA
TCTGACATTCTCTGCTCCTTGTGGTCTAGGAGGAATACTAGTGTCTGCTGCTGCATCAGTGAGC
GCAACTATTCCAATCAACAGGGTCCAGGGACCATGTGGGTCTTGGGCAAGAGGTGTTCTGCTGCTG
CATTGGTGGGCTCAACTATTCCAATCAGCAGGGTCCAGTGACCTTTGCGGGTCTTGGGTGCGGGGTG
GGGGGAACAAACAGACCAAAACTGGGGGCACTTTTGTCTTTCAGATGGGAACACTCAGGCACCAACAG
GCTCACCCCTTGAAATGTATCCTAAGCCATTGGGACTAATTTGACCCCGCAACCTGAAAGAGAGTGGCT
CATTTTATTCTGCACATATGGCCTGCTCCCAATATCTCTCTGATGGGAAAAAATGGCCACCTGAAGG
AAGTATAAATTACAATACTATCCTGCAGCTTGACCTTTTCTGTAAGAGGAAGCAAAATGGAGTGAAAT
ACCTTATGTCCAAACTTTCTTTTCATTAAAGGAAAAATCCACAACACTATGCAAAACTTACAATTCACATCC
CACAAAGGACCTCTCAGCTTACCCCATATCATAGCTTCCCTATAGCTCCCTTCTCTATTAATGATAA
GCCTCCTTAATCTCCCCCAGGAGGAACAAGCAAGAAATCTCCAAGGACCAACAAAAACCCCTG

Z

FIG. 16A(26)



0972855R . 1R720R

179/223

Z

GGCTATCGGTTATGTCCCTTCAAGCTGTAGCGGGGGAGGGGAATTTGGCCCAACCCAGGTACATGTCC
CCTTCTCCCTCTCTGATTTAAAGCAGATCAAGGCAGACCAGGGGAAGCTTTTCAGATGATCCTGTAGTAGGT
ATACAGATGTCTACAGGGTCTAGGGCAACCTTCAATCTCACTTGGAGAGATGTCACTGATTTGTTAG
ATCAAAACCTGGCCTTTAATTTAAAGAAATGTGGCTTTAGCCACAGCCCGAGAGTTTGGAGATACCTGGT
ATCTTAGTCAAAGTAAATGATAGAAATGACAGCTGGGAAAGGGACAAAGTCTCTCCCGGTCAAGCAAGCCA
TCCCTAGTGTGGATCCCACTGGGACCTAGACTCAGATCATTTGGACTGGAGTGGCAACATCTGTTGA
CCTGTGTTCTAGAAAGACTAAGGAGAAATAGGAAAGAGCCCTATGAATATTCAATGATGTCCACCATAA
CTCAGGAAAGGAAAGTCTTGGCTTCCCTTGAGTGGCTACAGGGAGGCCCTTAAGGAAATATAACT
CCCCTGTCACCCCAACTCACTTCAAGGGTTAATTTGATTCTAAAGATATGTTTATTACTCAATCAGCTGC
AGATATCAGGAGAAAGCTCCAAAGCAAGCCCTTGGCCCTGAACAAATCTGGAGGCAATTTAAACCT
GGCAACCTTGGTCTATATAGGGCCCAAGAGGAGCAGGCCAAATGGAAAGCGAGATAAGAGAAA
GGCCACAGCCTTAGTCAATGGCCCTCAGACAAACAAACCTTGGTGGTTCAGAGAGGACAGAAAATGGAGC
AGGCCAATCACCCAGTAGGGCTTGTTCAGTGTGGTTTGAAGGACAGTTTAAAAAAGATTGTCTCTAT
GAGAAACAAGCTGCCCTTCAAGCTGTCCACTATGCTGAAGCAATCACTGGAAGCCACACTGCCCCAA
AGGACAAAGATTATCTGGCCAGAGCCCAAGCAGATGATCCAAACACAGGACTGAGGGTGTCTCAGG
GTTAGGCCAGCTCATGTCAATCACCTCACTGAGCCCTGGGTACATTTAACCATTTGAGGGCCAGGAAAT
TGACTTCCCTACTGGACACTGGTGGGCTTTCTCAGTGTAACTTCCCTGTCTGGACAGCTGTCTCAAG
GTCTGTTACCATCCGAGGAATCCTGGGACAGCCCTATATCCAGGTATTTCTCCACCTCCTCAGTTGTAA
CTGGGAGACTTTGCTACAGATAGTAAGTATGCTTACCTAATCCTACATGCCCATGCTGCCGATATGGAAA
GAAAGGGAATTCCTAACTTCTGGGTGAACCCCTTAAATATCAAGGAAACTATGGAGTTATTGCAC
ACAGTGCAAAACCAAGGAGGTGGCGGTCTTACATTTGCCGAAGCCATCAAAAGGGGAAGGAGAGGGA
GAACTGCAGCATAAGTGGCTGGCAGAGGCGGGAAGACAGCAGAAAGGAAAGAGAGAAAGCAGAA
AGTGAGAGAGAAAGAGAGATAGGAAGTGTATAGCAAGAGGGAGTCCGAAAGAAAAGAGAGAGAGAG
AGAGGGGGAAGACAGAGAGACAG
GAGACAAAGAGGAGTCAAGAGAGGGGAAGAGAGAGTAGTAAAGAAAACAGTGTACCTATTCTCTTT
AAAAGCCAGGTTAAATTTAAACCTATAATTGATAATTTGAAGGCTTTTCTGTAACTTAACTCTCC
AATACCACTTGTGTGTCAGTGAACAAAGGTATAGCCCAAGCACTGAGGCCACTGACAAACCCGTAG
CCTTCTTATCAAAAATCCTTAACACAGCAGGTTTCTTAAACAGGGAATCTAAATCTTAAGGTGGACCCAG
ACATAGGAGGAACCTGCTTCAAGGACAGGATGATAGTGTCTCCAGGTGATTAAAGGAAAAGACAC
AATGGGTATTGAGTAAGGAAACTCTTATAGAGCAGAGTAGGAAATTTGCCCTAATAAGTGG
TCTGCTCAACGTTGAAGCTGTTTGTGCTTTGCACTCAGCTAAACCTTAAAGTACTTACAGAAATCAGGA
AGGAGCCATCTATACCAATCTAAGTTAATATGGACTGAACGAGGTTTATTATATAGCAAGAAATTA

A'

FIG. 16A(27)



09728555 . 170702

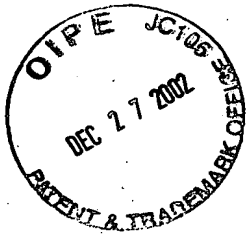
180/223

A'

AAATCTCAAACTTACAAGGTTTTCAACTAAAGTTTGCCTAAAGTTAAACAGCGTAACATGTATTA
TCCTACTACCTCACACTCTCTCAAGGATTCTCAGACAGTTTGCAAAAAGAAACGAAATCTGTCCCTTA
CTCTACAATCCCAAATAGACTCTTTGGCAGCAGTGACTCTCCAAAACCGCTGAGGCCTAGACTCTCTTA
CTGCTGAGAAAGGAAGATTCTGCACCTCTTAGGGTAGAGTGTTGTTTATATACTAACCAAGTCAGGGAT
AATATGAGATACCAACCCAGTGTTCACAGGAAAAGGCTTCTGAAATCAGACAATGCCTTCAAACTCTTA
TACCAACCTCTGGAGTTGGCGACATGGCTTCTCCCTTCTAGGTCCTGTGACAGCCATCTTGCTAAT
AGTCGCATTTGGGCCCTGTATTTTAAACCTCTTGGTCAAATTTGTTTCTCTAGGATCGAGGCCATCAA
GCTACAGATGATCTTACAATGTAAACCCCAATGAGCTCAACTAACAACTTCTGCTGAGGACCCCTTGA
CCGACCCGCTGGCCCTTCAATGGCTAAAGAGCTCCCTCTGGAGGACACTACCACTGCAGGGCCCT
TCTTCAACCCCTATCCAGCAGGAAGTAGCTACAGCGGTCTATCGCCAAATCCCAACAGCAGCTGGGTGTC
CTGTTGGAGGGGATGAGAGGTGAAGCCAGCTGGCTTCTGGGTCAAGTGGGACTTGGAGAACTT
TTGTGTCTAGCTAAAGGATTGTAATGCACCAATCAGCACTCTGTGTCTAGCTAAAGGATTGTAATGC
ACCAATCAGCACTCTGTAAATGGACCAATCAGCAGGATGTGGCGGGTCAAATAAGGGAGTAAAC
TGGCCACCCGAGCCAGAGTGCAACCCACTCGGCTCCCTTCCACACTGTGGAAGCTTGTCTTTTG
CTCTTACAATAATCTTGTCTGTCTCTTCTTGTCTCCACTACCTTTATGAGCTGTAACACTCA
CTGCGAGGCTCTGTGGCTTCAATCTGAAAGTCAACAGACCCAGAACCTGGAAGGAACAAGAACTC
CCGATGTGCTGCCCTTAAGAGCTGTAACACTCACTGCGAAGCTCTGCAGCTTCACTCCTGAAGTCAGTG
AGACCACAAACCCAGAGGAAGAACTCTGGACACACCTGAATATCTGAAGGAACAACCTCCAGAC
ACACCATCTTTCAGAGCTGTAACTACCTCCCGAAGGTCTGTGGCTTCACTTGAAGTCAGCAAGACC
AAGAACCCACCGGAAGGAACAAATTCAGACACACAGTAGGAATCTGTATTTTGTATCTGTGGCTTCCAG
GGTTACTCCAGTCATTGAAGTCTCCATTGCAGCTTAAGGAACACAGAGAATGGTTGGAGGAGCACATG
TGGGAATTGTTATGGACCAGGCTTGAGATGCACATAGGGCATTTCTGATCAACCTAGCTGGAAGCAGG
GCCAGGAATATAATCTAAGGAAGACAGTCTTTGTAGACAGTAGTAGTCTTTGCATCTGAGACATGTAG
ATTATCAAGCAATTAATAGAAAATAATAGCCAGGTGCGATGGCTCATGCTGTAAATCCCAGCACTTT
GGGAGGCCAAGGGGTGGATCACAAGGTCAAGGCTCAGGAGCCAGCTGGCCAAACATGGTGAACCC
GTCTCTACTAAAAATACAAAAATAGCCTGGTGTGGTGGCAGCATCTGTAATCCCAGTACTCAGGAGG
CTGAGCGAGGGGAATCTCTTGAACCTTGGAGGACAGAGTTGCAAGTGAAGCAAGATCACACCCAGCACT
CCATCCTGGGTGACAGAGCGAGACTCTGTCTCAAAAAAAGAAAAAGGAAGGAATATAATC
AAGAAATATGACAGGTAACATTTTAAACACTTACTATGCACGAGCAATACACTAAGTGTGTTTACAT
GGATTAACCTCATTTAATCTTAACAATAGCCCTATGAAGTCAGTGTGTTATATCTCCACTTTATAGAT
AAGGAAACTGAAGTACAGAAAGGTCAAGTAGAGAAATGGCCATGCTTGCATCTCTCAGTTTGAAGCAA

B'

FIG. 16A(28)



09/20/55H . 11/17/02

181/223

B'

CTGTTACAGGAATCTGGTGAGAAAATGCTCTAACAAAGATGTGAGTCAGGGGTGGAGGTAAGTCTGAGTC
TGAGTTGGCAGTTGGGATGGAAGGATGGATGAAGAACACAGCTTGACAGAGAAGCTGACACTTGGCAAC
TCTGTGGGACCTTGAAGGTTAGAGGACTTCAACAAAGAACTGGTGGTCAGGAAACGGGAGGTCA
CGCAAGGAGGAAAGGAACTGTACCAACAGAGAGTCTGAAGCTACTACAGTGTAGTTACGCGTAT
AAAGAAATATTTAAAGGTAACTTATAACCTCATGCAATATAAAATGAACACGTGTCAAAGATCT
TATTTAATTTAATTAATGAGGAACTGTAAAGTGTACAGCCAGTTCAAAGGATAATTCAAATAA
ATCCATGCACATATGTAGGCAATAAGGAATGCTGAAATGAATTTAAAGTAGATGTAACTGATTTATC
CACAGAGAAATAATCAGTTGCATTTACATAAACAAATTCAGTTGCTTTTCTACAGAAAGGAATGTTTG
CATCATTAACCAATTTTCTACAACTAACAGAATTATAAAATAACTCAAACACAATGAAGGCAGATATA
ACCCACAATGGTATGATAGATACAATATCCACATCCAGGATGTTTTTTCTCATTTCAAAGTCTTTTAC
AAGTTTTCTGATAAGGGAGTGTCAATAATACTGTATGGCAGGCAATAAGACTGGATGGTGGGG
CCAGGTTTTAAGGGTAATAAATGCCATGTAAAGGTATGTGCATACTGTGCAACATGTCCGGGGAATCT
CAAATATTGGTAGAGTATGTAGGAACACTTGTGGGAGCTTGTAAATAATTCAAATTTCCAGACCCCA
ACTCCTCAAGGGTCTAATACAGTAGGTTTGGAGTAAAGCCTGAAAAATCTGCAATTTGTCAAAAAAAA
ACCCAGGTGATTTCTGATACACTTTGAGAAGCACTGGTGAACATAAGTCACTGAACGTTTTTTGAGCAG
GGGAGAAACCTGAGGACGCTATGTTGCAGCAGTGGAACTTGATTAGAAGTAGGAGAAGATGCATGGT
CTTAAAGAAATGCAAAATGATGGCTAATATTGAGTGCTTATGATGGGCCAGGGCTGTGCTAGGCGG
TGGCACACATTCATACGATGGAAAGCCTGTACCAGTCAGTATTAGTGGGTATCTTTAAGAGTGACCCAG
AATTAAGGGGGTTTTTACCAAAGCCTGAGGACTGAGCCTCCTCATCTAAATTCAGACACAATGCTGT
ACCTATGCATTTGCCCTCCAGGCTGTTCTCGGCTCCAGGACTGGCCAGGCTCCTGATAAATAGGGA
CTCCCAACACATAAAGCCTGGATTTTGGAACTTCTGAACTGTTACTCAGGCTTTCTAGTAACTGTGGA
GATCTGAATAATAACACAAATCTAAGTTCCCTACTCATAAAGCTGCTCATCATTTAGATGGGTAAAG
CACCTGAAATACAAATGAGCATCACTATTTTCAATTCATCCATGAAATGAACATTCGGGGAGATCAGTAA
GTTGATGTATCACCTTGAACAGGGCAAAATGAATACTCACCAGGAATATGTGGTATTTTAAAAAGAAG
GCAAAGGGAAGAAATAGTGGGATGGGGCAAAAACCTTAAATAGATTTCCCAATCATATATAGGCAATTG
AAGATAATTAAATATCATTTTAAATTGAGTAAAGTACTCATAGAGCCCTCACTATTTGAAAAATGAACCTGC
CTCCTAATTGTTATTGTGCAAATGTGATACATTAACCTTAAGCTATTTAATAAAACATCCATTTTCGG
AAGCTGTAGTAGGTTCTCCAGGTCAGATTTGATAAGCCATAAAGAACAAATGCCAATCCTATTTTTC
TATGGTGTGGGAAATAAGAGAGAAATGTGTAATTCAAAGCAATCATTTAATTTTATCCAATAGCTTGA
TTCTCCTCTCTCTTAGCCTTTTAGCTAAGCTGTTACCAAGTAACCACTAGTTGGCTTGAGTCTTA
CCACTGTTTCCCTGACCCACAGTGGAGAGACTGCATCTGTTAAAGAGCAGTTATGTAAACCATGGCTAT

C'

FIG. 16A(29)



09728552.122702

182/223

C'

GCTGAGCTGGGATTCCCAAGGCTTAGGTTCTTCTGTGAATGACCTTCACCAAGACACCTGAGGTCCTGT
GTGGAACACACAGGCTTGTCATCTCTAAGGCAGAGTTGATAATTCATCTGTTCTTGAGCCACACTGA
GAAAAGATTACATGACTGCAGTTATTGTAATGCCCTCATGGAAAGACGCTTATAAATATTATAATTAA
TGTTATCATTAAGTAATGCTTCAATGCAGATCTTCCAAAGTATAAATATCAGCTGAGTAAGAAGTCAATC
TTCCCTGAAGCAAAATTGAAATTTGTAATGCGATTCTGGGAGCTTATTGTAATACATGATTCAG
AGTGTCCTATAACACACACAATTGTCTTTTTTCCCTACATGGGCTATTACAAACAAATTTGGACTTATA
ATGTTTATTCCAGGGATGACTAGAACTTTAATAACAAACCTTGGGCCAGGCATAGTGGCTCATGCCTA
TAATCACAGCACTTCGGGAGGCTGAGGCTGGTAGATTACTTGAGGCCAGGAGTTTGAGAACAGCCTGGC
CAACATGGCAAAACCCCTGTCTCTACTAAAAATATAAAAAATTAGCCGGTGTGGTGGCGCATGCCAGTAA
TCCAGTTACTAAGTAGGCTGAGGTACGACAATCGCTGGAACCTGGGAGCGGAGGTTGCAGTGAGCTG
AGATTGCACTACTGCACCTCCAGCCTGGGTGACAGAGAAAGACTCTGTCTCAAAAAAATAAAAAAAT
AATAATAATAAACCCTGATGAAAGGTTCTFAAAATGTTTTCATCTAATGGTTTCTTGACAAATTAA
ATTTCTATATAATGTGAGTTCATAAAAAAAGTGAACGACCATGTATATCGACTGCTTAAAGA
AAATACGTATATTACAAAACATATACACGATACTGTCTTTGCTGTTAGTTAGAGGTTAGATAAAC
TGCAGTATGTTGAGTGACAGATCATAGAACTAGGAGTCAGGATGCTGGATTCTAGGAAGCAATGA
ATAGGTTGCACGGTGACAGCAGCATCATGAGTATCTCAGGGAGCTTGTAGAACTGCAGATCCTTTA
ACTCATTGAATCAGAAATCCCTAGGTGGGGCCCTGAAATCTGTATTTAGCAGGCTCTCTGGGATTGT
GATGTGCTTAGAGTTTGACAACCACTGGGTAGCTGATCTGACTTAGACTTATCAGGCATGTGATCTT
GAACAAGTCACATAATCTCACTGAGTTCAGTTTCTTATGCTTAAAAATAGGCCCAATAATCTATTTT
ACATGGACTGCTTGAGGATTAGGCAAGAGATCTGTAAACAGACACTGTAGAACAGTGTCTCTGGTCTAC
AGCTGACCTTCCATAAATGGTAGTTGCCCTTGATCTCTGCTGCCACATAATAGCTGGTTAACTATGAG
CAAGTAATTTAGTTCTCTCAGTTTAGTTTCTTCACTGTAAAGAAAGGAAATAAATGTTTATACTCAA
TTTCTGAAGTGGCTATAAAATCAGTTTAAATATAGGCAATTGAAGCTCTTTGTACACTGTATAAGGAC
TGTAACATCTAAGGATTAAATGAGACCAGGCTTATGATTTTAAGCATGGAGTAAATAGTACACTGACTC
TGTTCTATGAACCAACATGGAACTCTAAGAAATATGCACATTTGAACACACAGGTATCATCTGGGGAAGG
TGATCTGCTCACCACCAACAGTTTCATGAACATCAATCTCCAGTGGCGTGTGGAGCTAGCTGTACCCAGC
TCATGAGGGCCAAATTGTTTCATTTTAGGAATTTTGTGCTGTTAAAAATAGTCATTTATTTAAATTT
AAATTATGTAAACAATAATTAGATAAAATAAGTTAAATAAAAAACAAAGGAACATAATTATCCCCCAA
CTCTTCCCCACCTAATTATTTTACTATCTGTGCCCTTGGGATTATTTACATTGATTTTATCCATATGGTG
ACAATACTATTTCATATATAAATGGTGTGCTTCTTTCATAACTCTACATAGCCCTGATGTCAGGCTAGTA

C'

D'

FIG. 16A(30)

D'



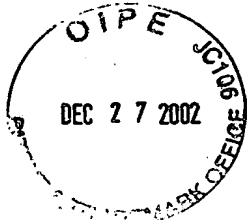
09728552.122702

183/223

D' GCTTGAATTTGCCACAGTGGGAGTGTGAGCATTTGTACCATGAGGCTTGGCCAAGGCTACAAATCCAG
ACTTTTGTITTTCCCTCTGGAGAGCTGCTGTTAAAAATTTACCAACACACCACTGGTCTTACCTTTG
TAAATTTACCACAGTCCAGGTTCTGACCTAGACTTAGAAACCTGGATTTGTGAGCAAGCTGAGGATAGA
GCCATTATTTTAAAGAAGGACTCACATTACCCAAAGTGCAAGCCTGATATATACCTTCAGAATATCAAT
TTATTAATTTACAGTGAAGAAAGCCACCCAGGGCATTTCCAGGGGAAGGCAAAAGAGCTAGTTGCA
CATTTTGAATGTTTATGACATTAGGGTAAGGTGACACAGAAATATCCATTTCCACAACCTGAGATACCTG
CTGCCTTAAGGAAGGACAGGCAAGTCTTGGGAGGACCTTAGATTGTCACTGTCCATCTTGCTCTAG
GACTCTCCTTTCCAGGCATGACGATGGCCAACCTGTCTCCTACTACCCCTACTGATGGGATTATCTTTTCT
TGACACATGGCAATGCCCTCCAATCAGAGGCTGGTAGCTATTTTAAATCTTCAGGGCAGTATTTTCAAA
GGGAAGTTTCATGGACCATATGCACTGTATCATTTTAGATGTATATTAAAAATGCTTAGTCTTCCCCAGT
TATACTAGATCAGAATCTCTGTTGGTGGGGCCACGAATCGGTATTTTCAACAAATCACTAGGTAATTT
CTGTATATACTATAGTGAAGACCACCTGCTTGAAGGTTTCTTTGCATATCTCCACTAAATATAAAAAA
TATTGACTTCTAGATTTAACTCCCAAGCACTTGCAATTTTAAAGTTTCTGGGGCATTATATTGTTA
CCCCATACCACCTCACACTCTAGTCAGGAGGTATATTATGGACTGAATGTTTGTCTCCCTCCAAAACTC
ATATGTTGAAGCTTAGCTTCCAATGTGATAGTATTAGGAGATGGTGCCCTCTGGAGGTAAAAATCAAGC
CCTCATGAATGGGATTAGTGCCCTTAGAAAGAGAGCTCCGTCACCTGCTCTTTCCATCAATTGAAGATGCA
GTGAGAAGCTGGTAGTCTTGCACTGTGAAGAGGGCCCTCACACAACTGATCATGCTGGCACCTGGTCT
CAGACTTTCTGCCCTCCAGAACTATGAGATGATAAATTTCTGTTGTTCAATCCCCACCCAGGCTACAATA
TTAGGTTGCTGCAAAAGTATTTGTGATTTTTCCTTTACTTTTTCAGGGCAAAACTGCAATTACTTTTGT
GCCAACTTAATATTTTGTATAGCAGCCCCGAACCTAAGGCAAGGAGACTACATCAGACAGTGTAGCTAT
GTAAGTACAAATGTATCCCTGTTGAGGAAACTAAGTTCTAACCTGACTTCAGGCCAGTAGCCACCTT
TTCAATCTCTTTCATGAAGGGACCATTTATCATTTACTGTTGCAAAATAGAGGCCAGAGAAATGGAA
TTTGCTTTTCTGTGAAATCTCAGTGTATACAGATTGAAGAGCAAGGTTTTCCTTTTCATCTCTAAGAAAGC
AAAAGTGAGTACGGACTGGCACATTATCAGAGAAAGAAATCATTTAGCTCGGTGGGTCTTAACCGAGAG
TGAATTTGACTCCAGGGAAACAGTTGGCAATGTCTGGAGACGTTTTTATTTGTTATAGCTGGGGATGAG
TGGGTGGGTTGCTACTGGCATCTAGTGGGTGGAGACCAGAGATGCTGTTAAACATCCCGCAAAAGCACAG
GACAGTCCCCGACAAAGAAATATCTGCCCCCAATATCAATAGTGCCAAAGTTGAGAAACCTCAT
CTAGCTTCCCTTTTCCCTTCTACGTTCTAATCAACTGTTGTTCTTTCAGCATTAGGATTCTATCCAGCAGT
CTCTTTCCCGCAGCAATTTGTTGAAAATTTTTTAAAAATGGACTCATTTTAGTGTACAGAAAAAATA
CATTACAGGAAAGGATGGGTCAATTTTGTTTAATGATGTTTTTGCCCTTTCACATAGCAAAAGCTTAATAA
AGTATTTTAAATAAAATGGTGAATAGATCAAAACATTAAATTCACATGTGTTTTTAATAAAATAACAGGA
AGATGGCTATATTATATAAATTTGTTCTTGATATGTCTTGAGTGGATCATCAAAACACAAACGTTATCTAC

E'

FIG. 16A(31)



09720552 . 12/27/02

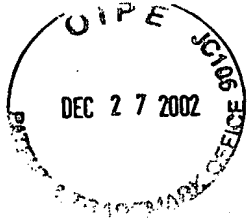
184/223

E'

ATGCCCTTTCTTGTAATAGATCTAATAATAACGCTCTTCTAAAAACAAATTAATGGATATTATTGC
TGAGAAATGTAATGCTTGTGTGAATAGAACCCAGCCCTGAATCCAAGCCCCAGATCTATTTAAAGAATT
TGAAGAAATGTCAGAAAAGCACGTGGCTTCAAGGTTAATGTGAAGACTCACAGAAACTTGAAAAATCAC
TATGACTAAAAAGAAAGTATGAGCTCCCTGCATGCCTGTAAATTTGGAATGACAGCCAAACCCAGTTAAT
TATAAAACAGCTAATTTAACAGGTTTTCAAATTTGTTTCTTCTCCAAGTAGCATATAGTCAATAATC
CTTAAAGAGAAAGCAAAGAGGGGAAGCACTGAACCAAAATTTGCTTTTGTACCTGCTCAGCTCAAAT
GCAGAGTTCTCTACCTGGAAATTTGACTGCTTCCATAGTTTGATAGCCACAGAGAGATGGGAACAGAAAG
AGAGGTATAATCCCAGACTTGATTCAGCTATAGAGAAATGACAATAGTGTGAGAGGCCCTTCCAACCCAGAG
CGACTCCATCTTGAATACGGGCTGGGTAAACAGGGCTGAGACCTACTGGCTGCATTTCCAGGAGGCT
AAGCATTTCTAAGTCACAGGATGAGACAGGAGGTGAGACAAAGACCTTGCTGATAAAACAGGTTGTAATA
AAGAAGCCAGCCAAACCCACCAAAACCAAGATGGCCATGAGAGTTATCTGTGGTTGCTCACTGCTC
ATTGTATGCTAATTAATGTATTAGCATGTTAAAGACACTCCCACCACTGCTATGACAGTTTACAGG
TACATTGGCAACTTCCGGAAGTTACCCCTCTATGGTCTAAAAAGGGAGGAACCCCTCACCTCCCAGAAAT
GCCCCCCCCTTCTGGAAAACCTTGTAATAATTCACCCCTGTTTTCAGCATATAATCAAGAAGTAACTGT
AAGTATCCTTAGGCCAGAGCTCAGGCCACTGCTGTAATGTGGAATAGCCATTCCTTTTATCCTTTACT
TTCTTAATAAACTTGCTTTCACTTTACTGTATGGACTCCCTGTGAAATCTTTCTTGCAAGAGATCCAAAG
AACTCTCTCTTGGGCTCTGGATCAGGACCTCTTTCCAGTAACAATAGTAGTAAGGGGTGAGGGAGACTG
GACAAAGGAGTTTAAAGAGCCTTAGATAAAGGGTCCCTCATATTGTCATAACATAAAATCATGGACTCC
TAGAATTTTATAGCTGATAGGATTAGAAATTTCAAAATTTCAATTTTCAATTTTCTCATCTGCGAAAACA
GATGGCCAGAGAGGCCAAACAAATTTGTTAAGGAGCACTGAGGGCAGACACACTGGAACGCAACCTCT
TAGCAGAGTATACAAGGCCCTTGATCTCCTCAGTCAGAAATGAACCTAGAGCTTTCAGGGTACCCCTTCT
GACTGTTTAGCATGTTTGGCAGCTGACTAATTTTGAAGTTGCTTAAATATCTGTCAATTTCCACTGTAT
CATAATCTCCTCATTCATCTTCAATCTCCAATGCCCTTGAACCTCAGTAAATGTTAGTTGAACAAAAGTAA
ATTGAACCCAGAAATTTCTGATCATAATCTGGAGCACTTTAAAAATTTGTCAGCTTACTGGGAAACGGGATA
ACATGTGATTTGCTTTGATTTTCTCATATGCTTTTCCACCTATAGATGCTACACGAAATGTT
TTTAAATCTGATATAAAATTAATAATTAATAATTAATAAAGAAATTTGATACAATGCTACATTTA
GAGTGTGTGATTAGATTCCTTAAGTGTATCATGGTGATCTCTACATCACGTTGGTGATCAAAATGCTTT
GGGTTTAAACACATAAAGGCTGGGACATGTAAGATCCCAATACATTTTATGATTTT
TTTTCTTTGTTGCTCTTTTAAATAACTTTTTTTTGTATAGAAATAATTCATGTTTCAAGTGGAGAAAC
CATAGAAAATAGTGACAAAGTGAAGGAATAAATTTAAATGACCCATAAATTTGACCATACATCTGATTT
TTTAAACGCTGAACAAAATTAGCCTTGGGTAAAGTACCAAGGAATAGAGTGCAGCATTTGAAAGTTAAAGTTT
GGGGAAGGATAGCTGACTTAAGAAATTTATCTAGTTAGACATTTTTTGGATGGGTACACTGTTTGRGAAG

F'

FIG. 16A(32)



09720552, 122702

185/223

F' G'
GGCGATCGGTGCGGGCTTATTTCGSTATAAACGCCAGCTGGCGAAAGGGGGATGTGCTGCAAGGGCGATTAA
GTTGGGTAACGCCAGGGTTTTCCAGTCAACGACGCTGTAPAAACGACGGCCAGTGAATTGTAATACGAC
TCACTATAGGGCGAAATGGGCCGACGTCGCATGCTCCGGCCGCCATGACCGGGGATTATGTCTCTA
CTGTATTTAGAAATCTGATAAAGCCCCATTAGAAATTCATCTCTTTAAGAAATAAAGAAAGCTGAGGAACT
AAAGAGAGGGTTGGAATAATCCACTAATTATATCCGTTAAGCTTCAGTTACGTTAATAGGAATATCAC
ATGACTGTGGTGTGCTGTTCTGAACAGTAAGTACATGAGGAAAGATAAGATTCAGGGCTGAAATG
TCCTTCAGCATATGTAGGTAGTGGTGATGAAAGTCATTAAGAAAGAAATTTGATTGAGGTATTTTAGTAA
ACAAAAGAACTCACCACTTACCCATCAGGAAGTGATTGTTAATGCAGTGTCTGTTCAGCCTTCTGGAAG
AAAAGGTTTCTTCATGCTTCTCTTTAGCCTAATTTCTATCTGTCACTTTTCAGGCCAAAATTAATAA
AAAAAAAGATTGAAAACGATGCTCTATTTTATTTGCTTCAAAAGAAACAGGCTGTTGCAATTTGCTT
GGAACAGTTTACTCTTTGGCCTTGATGTAAAGTGTGAAAGGAAGCCCATGTAATTGACTAGGCAGTATCTG
AAGAAGCAGGAAATACAGTGTAAAGAAATGAACAGGCATGAAAACCATGGCTATTTGATAAAAGTAA
TAATTTCTGCAGTTCACATGTTCTCAGCATATTTCTTTGATACTGACTTGCTTAATATGACAATAGCA
GAACCATGGTAGCTTGAGGCATTACTTTTCTTTTAAATTTCTTTTACATTTTGAATTTTACCAGCACTCA
CATTGTATTACTTTTGGGTTATACTGAGGATCTATAACTTATAGATCAAAATACCTGACATATATATGC
ATTCTCTGAAGTCTTAGGGCAGAACTAGAACATTTCTGTGAACATCAGTATAAGATATTAATAATGGAAG
TTTTGCCTAAGACTGAAGACAAATAAAATATCATAGTCTGAAATGAATGCCAGCACACCACATACAGGATT
TAAATATCTATACATATATATGTGTGTATTATATATATATTTAATATATATCTGTGTGGGATAGGAAAGA
GGTAGGGGAAATCAGTTTACAAATTATTAAGTATTTACCCCTTGACAAGAGTATATATATTTGGAATC
AGTTGGAGAGTATTTCAAGATATAATGTAGTGTGCTATGAATGAATCCACCCCTACCACCACTGAGG
CAGGTAGGAGAGGCCCTGTGCTCCTCAAGCATAGTTGGAAAGGACCTCAACAAGACCACTTCAAGAGT
CTAATGTGTGGAGACTGTTGCTTAGGGAGACCTTATGCTAGCTTCTGACTCACAGCTAAGTCAAGGA
GACAGGTTGGCTGCTGATCGTGGAGTCCAAAAGATGGCCTGCAC TGAAAAGCCTCATGAGTGTGAC
TTAGGGCTAGCTAAGAGTCCCTGGAAGAAAGAAACACTCAGTAGGAGAGAAGCTGGAGGTACCTTCAG
TGCTGAATTTGGAACCTAGATTCAATCCCCGTGGAGCAAATTACATAGGAAAGATGCCAGTATGGAG
AGTGGGGTGTCTCTAACAATTACCCACCCACCTGCCCCACCCCTAAGAAAAGAAATCACATACAA
CCAGTCAGCTGTAAACATATGCCGAGCCTAGTAAACTCAGATACTAAGTTACCAGGGTACCTGGCAAGT
AAGAACATTCCTGATTCCCTTCCCTCTCTCTCTTGGCCCTCCAACTTAGTGGCTAGCAAGATGGG
GAGAGGAGGAGAGCTGTAAGTGGGGAAGAAAGAGCAGCTTTCTCTCTCTTTTACGCTGCTGGATTCTCC
CTCATCATAGGCCCTGAGCTGGGAATCAGGAAGAAAGGATTCTTTTAAAACTGAAGTAACTGTTATCAT
TAATTTTAAACATTTTAAATTTTGACAAATGTTGAGATTAGATATATACTAATTAATAAGATTATG
TTTTGCAGCTTGAAGTGATAAGAAAACCTCTTATCTAAGAGCATCCAGGAAAGTCTGGGGTTCTCTGA

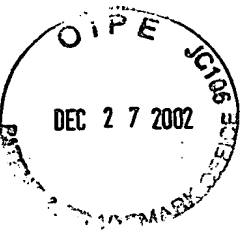
FIG. 16A(33)

G'

ACATCCTTTTAAATCCTTTGGAAATCAGCTTTTTCAGAGAGGATTTAAAGTGTAGACTGGCCCTTCAGAAA
CTTGGTTAAATGTAGGGGTTTCCATATGCAGACTTTGGGACTATACCTTGTGTGGAAAGAGAGAAAATAAGA
TTATCTTACATTTTCCCATTTCCATTTTCAAAAAGAAAGCTCAGCTAGCATGAAAGTTAAATTCAAAAC
GTAATGGGTATTTATTTGCATATTTCAAATCTAGTGCATATCATGTAAGTACTGAATATATGGTATTCATTA
TTTCAAATGACAAGCTGGATTTTCTTTTCTTTTCAAAATTTCAAAATTTTCTTTGGAAACCTTTTGG
TTTGGGCTTTAAGAGTTTAGGCTTTTCATCACAAAGAGAGGACAGCCTTGAAGATTAAAGTGTGTGGCTC
TTCTCAAGATGTTCTTAGTCCAGCAAAGGATTTCTATGCATATTTGGGCTTCTCTCTCATAAACCTG
TATTTCTTGATATTTCTATTTATATTTCTGTAAGATTTTCTTTTAAAGGAAAAATTTCTTCCATGGTTGAA
GGACATGTCAAAAATAGAGGATACAGTTTATATCAAGGAAAGTTTTCATGATATGACTGTAGAAGCTCA
TTTGACTTAAGACACATCATTTCTCATGGAAGTTTAAACAGATCTGTACAATAAGGTTGGCAATCTT
TGTGTAACACAGTTTCTCTGCTCTAAAGAAAGTGTATATTTCAAATGTGAATGTCAAGCTC
AGAAATAGTATTTTAACTTCTGTTTCAAGTCTTCAAAAACCTGTACCTAATCATGAATTTTTT
TCCCACAGATTTGTTCTCTCTCTCCAGAAACTTTTGAAGTTTCTACATGACACAGGACCTAT
GTCTTTTTTAAATACACAGAAATGAAAGAAAAAGTGTGTGTATCGTTAACCAATATATGAAATC
TTTAAGCTGTATTTTAACTTTTGTGTTGCAAGAGGCCATTTCCCTTTGGTTAAATAATTTGTT
ATTCACAGTTTCTCTGTCTCATATTTCAAGGGGAAATTTGTAGAAATTTTAAAGGAAAGCTCTAGGCA
ATGTTTTCATCCCTGAATCTTTGGAGAGTTATAAAAAACAAACAGATTAAGTAAACCTGTAAAGAAACCAA
TCGTGAAGTCATTACATCTAAGCATAAGCAAAATCTCTCTTGGATCATTAAGTTATAGAAGAAAAAGAA
AGCTGCACTTTGAAATTTAAATAAGCTTGTAACTTGTAAAGTCAACACAGTAAATTTTACAATTC
GGAATATCGATAGCAGTTGAGTTTAAATAGACTTCTCACATTTCCAAATTTAAAGCTTCTCTCTGTGCT
AATAGAGATACAATAGCAGTAGGCGTTTAAAGAAATGAATCAACAATTTAAAACTATAATGTGTTTTT
TATTCATCTCCCTTATTCACATATATTTGTTTGTGTTTGAAGAGGATTTCTGCTCTGTGCCCCAGGCAG
GAGTGTGTGGCAGCATCTCAGCTCACCGCAACCTCTGCTCTCCCGGTTCAAGCGATTTCTCTTGCCTCA
GCCTCCTGAGTAGTGGAGCCTGCCACCATGCCCGGCTAATTTTGTATTTTAGTAGAGATGGAGTTT
CACCATGTTGGCCAGGCTGGTCTCGAACTCCTGACCTCAGGTGATCTGCCACCTCGGCCCTCCCAAAGT
GCTGGGATTACAGGCGTAGCCATCACTTTCTGGCCCTTATTCGCATACAAATTTAAAAATCATCACAGAA
GGTTTGAAGAAGGAGGGCAGAAATTAACCTACTTTCTCTCTCCCAAGCGATCTCTTCAAATCTGT
GCCTTTCTCAGGCCAGGCTCAATTTACTGAGCAGTCACACCTCACAGAGGAGGTCTGGGCAATC
CACTCTTGGTCACAGGAAAGCCATTGACCCCTCCCACTTCTCTCTCCCACTTGTCTCAACTCTTGAC
TTTGGGCTTTGTTCTGTTCAAGTCTAGGAACTGGTTTCTTTTATCAGGTTAAGTATTAGTCTCTT
TCCCTCTAGTTGCTCTCACTCCCTGACTCTTGCCTTCTGTAACAACTGGAGACAACCTTTTCAAAACCA
GCTCCAAAGCCCCAGACTTCTCTCTGGGCTTTAGTTGTAAGGAGGCTGCCCCTACTGAGTGAGCCTAGAT

H'

FIG. 16A(34)



09720552 122702

187/223

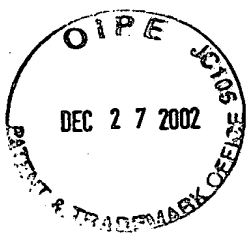
H'

CAGACAGAAACATAGCTGTTGGCAATGATTTAGGTGAATTTCCCTTCCATTGTTTTTCTTAATACCTTCTTT
TTTTTTGTAAATATAACCATGCACATACACACATATTTGAATATATCCTGCTTTTTTATTTAAAAATGACAA
TAGGTCGGGAGTGGTGGCTCATGCTGTAAATCCAGCACTTTGGGAGGCCGAGGTGGCAATCACCTG
AGGTCAGGAGTTCGAGACCAGCCTGGCCAAACATGGTGAAACTCCATCTCTACTAAAAATCAAAAAATTAG
CCGGCATGGTGGCAGGCTCCAGCTACTCAGGAGGCTGAGATGTGAAATCGCTTGAAACCCGGGAGGT
AGAGGTTGCAGTGAGCTGAGATCTTGCCATTGCACTCAACCTGGCAATAAGAGCGAAACTCCATCTC
ATGGAATAAATAAATAAAGACAGGATAAATCTCTAGATAGTCTCTATAATGGTCATGATTAAGACA
ATAAATAGTCTGAAATTGTCAATATATATTAATAATAATTTATTTGGCCATTCTGCCAAGTAGCAGAC
ACCTGTCACTTCTGCCACTCAGCACCTCTCTTTCTTTAGGGAATGCTACCCACTCTTTGCATGGGT
CTGGATGGAAGTGTGATCACAGTGTCTTCACTCCCCATTTTGCCCTCACCAGAGGTAGACAGAAGACCC
AAGCCAGGCCAGTTACACACAATCTTCAGATAATTAACCGTATTGATCACAGTATCACCCCACTCAAGGC
TTGGTTGGAGATGAGCAGAAGAGACTAAAGCTGGGTCAATTTAATTAACACCTGTACCCCAAGAAAGA
CTGTCAATGAGGCTTTTATACCGACACTCTGCTGTTTCCATTCTTCTGATGCCATTCTATTGACGAACT
ACCCAATCTTCCAAACAGTGTCTTTGGAAAGAAAGATAGTCAGAAAGAAAGATAGAGTTGTTTTCTGTT
TTTGCAACCAAGGAACCTCTAAATGATAGACTTGTGCTAGGCACCTTTGGTTATTTTATATCTTGAAT
ACTTCTGTGATATACTTCTTTGTGCATGCTGTTGTACGGATGAGCTTTTTTATATATTTTATATAAT
TTCTCAGAAGTGAATTAATAGTCAAAAGGTATGAACATTTTCTGATTCTTAATATAAATTGTGCAA
ATGCTTTTAAAGAGGATTAACAGTTTACATTTTGTGTTATATAATAACAGAAAGTACTACTGAAAAAA
TATTACAAAAAATTTGTCTCTCTGTTTCAGGAGGACCTTGTAAATAGATGATAAAGTACTTGAAATAGGAAC
ATAGAGCATTTTTCAGTTTAAAAATAATTTCAATGGGTATTTACGGAATCCTTAGAATTTAGCCAGACA
TTTATAGATGATCTGTACCAAAACCTAGGTGGTTACATAAATGCTTATTCAACTGGCTTAAATCTATA
ATAGAAAGATGACACTTACTGAAATGTTTAAATATACACTTTGTGTCAGGGGCTTTGTATTTCTATGACAT
CTTCAAAATGACCTACTTTCTTATTTTATAAGTAAGGACAGGAAGGCTTCAAGAAACATGACTAATTTT
CCCAAGGCTGTACCAAGCCAGAACCCAAATCTATAAGGCTTTTAAACCTGCATTCTAAAACTGCATC
TCGGCCATCTTATTCACAGAACTTAAGGTTAGAAAGCCAGATTGGAGTCCCAATTTCAACCACTTAGT
AACACAGACAAACTTGAGGAATTCACCTCAACGCTCTTTGAATCTCCATTTCCTAATCTTTAAAACTAAAA
AATAATACTGGCCCTACCTATTTCCATAAATTTCTGAGGCACATAAAAAATAGTGTGGAATAATTGCTGT
ACAAATGTCAATTGTTACCGTGATTAATCTTAAATCCCTGAACACCATGGATGAATGTCTGACTGCTAT
TAAAGTCAATAAAAAATATTGGGGCCAGGTACATTGGCTTATCCCTATAATGCCAGCACTTTGGGAGCC
TGAGACAGGAGGATCACTCGAGGCCACGAGTTCAAGACCCGCTGGGCAACATAGTGAGACCCCTCTC
TACAAAAAAGCAGCCACGTGTAGTGGCACACACCTGTAGTCCACATACCTCAGGAGGTTGAGTTG
GGAGGATAACTTTAGTCCAGGAGTTTCAAGGTGAGCTGTGATTGCACCACTGTACTCTAACCTG

I'

FIG. 16A(35)

0972352 12702



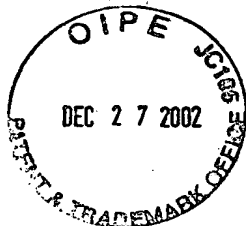
09720552.122702

189/223

J'

TTGCAGCTATGTTTCTATCCCCATAGTAACTAAAGAGAGGACCCAGAGAAACATGTTTAAATGCTGTCCT
GTTATCAGGACCTCAGCCTTCTGATGCTCGTGGCTTGGGGTTATTGCTTGATCATCTCCTCCCCAAC
CTACACTGTGTACCTATGCTAGTCTCTTCATGAGGACTAAGCCCCATAGTAAAGGGCTAGATAAATAG
AAATCATTTTATGTAATTATAAGAAATGAGAACTACTGAGTATTCTGGTGTGTTTGTAGGATAAGCACAT
CTTTATTGTATGAGAAAAGAAAAGAGAGTGAAAATATATTAACTGTCATATTGTTCAGAACCCCTT
GGATTGCAAGTGACAGAACTCAATTCAAACCAACGTAAGTCAAAGGAAAATATATTGGCTCATGTAA
CCTTCTCAGAGAGGGCAGGATGGAAGGGCTTGGGAACAAGAGAATTGTTCTCAAATTTCTAGGAAT
ACTAGGATTAGTCCAGGATGGGTCACTTCTGTCCCTGAGGTGGTAGCGATGGTAGAGTCTTATG
GGAGGAAAGAGTGCATGTTAGGATGAAGTAGGGCTAAGCAAAACAAGGGCAAGGCCACTATATCATGC
TAAAAATGGTTTTTTTTGATGCTCTTCCCTTAATTTCACAAATGCTTCCAAACAAGTAGCACACAGGAAAA
AGAACATAGGAGCTACTGGTGGGTGCTTTTATCTTAAGCCTTGCTACTTGCTTTTACAGCTTACTCA
CTGCTTGTAACCTGAGGCCATATGCCCTGTAAAGCTTCTGCAGGGTTTCTACTAAGCTGGGTTCCTTAT
ATGGCTCTCTCCCATTTCTGTTGCCCTCACTCTAGTGATCTTCTCTTTTCCCTCACCTCTGGGACTGGTG
GCTGTTGTATGGACTGCCCTTAGCTTGGCTTGGGTTTTTCTGGGGACAATGTCTTCAGATTATCCT
AGACCAATAAACTACAGCCACTGGGCCAGGCTCTTCTCTCCCTCAACTGGACCATGTTCCCAAGGCTCT
TCACCTTAGTTAGGTCAGCATTTCTGGCAAAAGAAAGGCTAGTTAACATAGACATTTCTAGCAATT
GATTCCTTTTGACATGTTGTAAGATCTATTACATTTTGTAAATTAAGCATTTCCCTATGGAACCAAC
ACGAACTAAGCTGCTCCTGGAATGCAGGGTGGCTCCTCAATACAGGATGTTCTAGAGAGCTGTATTTT
GGGCACTTAACATATTCTCCACTACTTAGGCAAGCACTGAAATTAACACCACTAAGTTTGTCTATGTCC
ATGTAGTTAGTCTCAGGCAGTGCAGCCTCAGGAGTGGAAGTCACTGACCTCTTATGTGTCCAGCCTTTCTT
CCTTCAGAACTCAGCTGTGTTTTCTGCTGACTCTCCATAGGAACATCAGTCCCTGAATCCTCAGACCCACC
ATCTGGAGTAGTAAGTGCTCCTGACAGTCCCTAGAAGTTGTCTACCGCTGGATCTCCAAAGCGGTGTGACA
CACCGTGAGAGAGAAATGAGAAAGCTGGGCTCTTCAGGTAATCTTGCTTTTTCACAAGCCCCCTAATT
TTACTGCATAATTATTTTGAATTCAGTGATAATTCTACAAATTTTCCCATAAAGTCACTACACACAATA
CCCTCTCATGCAACACTTGGCTTTGCTAATACATATCTATATGAGAGCTGTGCTTTCTTAAGCGTAAAT
GTTTTATATGCACTAAGGCTCTTGGCTTACATATAAAAGGGGTATTGAGCAATGTGATACAGAAAGTCTT
TTCCTCACAGGTCTCATATGTAAAGAAATTCATAGATTGGCTGAAATAGACTGATCTGTCCATTTCTCT
GCTCACTTATCATAAGGAAGTCATTAGCTAAGGAACAAAACCTACAATCTATGTAATTAGAAGAACAAAG
CTGGTTTTGCTCAATATAAAAATAAGAAAAGAAACCATGTGAAAGTCAAAATATTTGTTAATCAGGT
CATTGAGAAATCTATTAAGAAAGTATTGAATTTCTTATGATGAGAACTATCTTGACTCAAGTGGACAGTG
GTGAGCTTTTGGCCTGTGGTCCCTACGTAGAAAGGAGGCTTTGTCAATAAAGTCTTATATGTTACAGGT
GCCAAGTTAAGTGCCCAAGCTTGCTCTTAAAGCATACTGGATTTTG

FIG. 16A(37)



00700502 . 120702

190/223

BAC-F2 sequence contigs

Contig 1 (5596 bp)

TATGGACATATTGTCGTTAGAACGGGCTACAATTAATACATAACCTTATGTATCATACACATACGATT
TAGGTGACACTATAGAACCCAGATCTGATATCGAATGAATCTTTCTTGCAAGAGATCCAAGAACTCTCT
CTTGGGGTCTGGATCAGGACCTCTTCCAGTAACAATAGTAGAAGGGTCAGGGAGACTGGACAAAGG
AGTTTAAAGAAGCCTTAGATAAAGGTCCTCATCTGTCATAACATAAATCATGGACTCCTAGAAATTT
TATAGCTGATAGGATTAGAAATTTCAAAATTCAAATTTTCAATCTGCGAAACAGATGGCCA
GAGAGGCCAAACAATTTGTTAAGGAGCACTGAGGGCAGACCACACTGGAACGCAAACTCTTAGCAGAG
TATACAAAGGCCTTTGATCTCCTCAGTCAGAAAGAACTAGAGCTTCCAGGGTACCCCTTTCTGACTGTTT
AGCATGTTTGGCAGTCTGACTAATTTTGAAGTTGCTTAAATATCTGTCAATTCCTCATTCATAATCT
CCTCATTCATCTCAATCTCCAATGCCTTGAACCTCAGTAAATGTTARTTGAACAAAAGTAAATTGAACC
CAGAATTTCTGATCATAATCTGGAGCACTTTAAATTTGTCAGCTTACTGGGAAACGGGATAACATGTGA
TTTGCTCTTTGATTTTTTTCTCATATGCTTTTCCACCTATAGATGCTACACGAATGTTTTTAAAT
CTGATATAAAAATTAATAAATTAATAAAGAAATTTGATACAATGCTACATTTAGAJTGTG
TGATTAGATTCTTAAGTGATCATGGTGATCTCTACATCACGTGGTGATCAAAATGCTTTGGGTTTTA
ACACATAACTGACAAAGGCTTGGGGACATGTAAGATCCCAATACATTTTATGATTTTTTTCTCTKG
TTTGCTCTCTTTTAAATAAATTTTGTATAGAATAATTCATGTTTCAAGTGAGAAACCATAGAAA
ATAGTGACAAGTGAAGGAATAAATTTAAATGACCCATAATTTGACCATACATCTGATTTTTTAAACG
CTGAACAAATTAGCCTTGGGTAAGTACCAGGAATAGAGTGCAGCATTTGAAAGTTAAAGTTTGGGGAAGG
ATAGCTGACTTAAGAAATATCTAGTTAGACATTTTTTGGATGGGTAATTTTGCAGATGACATTAGTG
AGAGAAAGGACTTGCCACTCTCACACAGCTAGTAGGGGTGTTGGAGGATATTGGAACCAAGTTTCAAGT
CTTCAGTGAAGAATCAAGGAGAGATTCTAAACCTAACATAATCCCTCTGGATGGACATTTATTTAT
TACTACAATAAGCCACACGGTGAGTCATAAGGAGCATTTTCAATCTTCTAATATGTCTCTACTGATTTA
GAATCTGATAAAGCCCTATTAGAATTCATCTCTTTAAGAATAAAGAAAGCTGAGGAACCTAAAGAGAGG
GTTGGAATAATCCACTAATATATCCGTTAAGCTTCAGTTACGCTAATAAGGAATATCACATGACTGTG
GTGTGTGCTTGTCTGAACAGTAAAGTACATGAGGAAAGATAAGATTCAAGGCTGAAATGTCTCTCAGC
ATATGTAGGTAGTGGTGAAGTCAATTAAGAAATAATGATTGAGGTATTTTAGTAACAAAGAA
CTCACCACTTACCCATCAGGAAGTGTATTGTTAATGCAGTGTCTGTTACGCCTTCTGGAAGAAAGGTTT

A

FIG. 16B(1)

A



097200554, 1000000

191/223

A

CTTCATGCTCTCTCTTTAGCCTAATTCTTATCCCTGTCACCTTTTCAGGCAAAATTAAAAAAAAG
ATTGAAACGATGCTCCTATTTTATTTGCTTCAAAAGAAACAGGCTGTTGCAATTGTGCTTGGAAACAGTT
TACTCTTGGCCTTGATGTAGTGTAAAGGAAGCCCATGTAATTGACTAGGCAGTATCTGAAGAAGCAG
GAAATACAGTGTAAAGAAATGAACAGGCATGAAACCATGGCTATTTGATATAAAGTAAATTTCTG
CAGTTCACATGTTCTCAGCATATTTCTTTGATACTGACTTGCTTAATATGACAAATAGCAGAACCATGG
TAGCTTGTAGGCATTACTTTCTTTTAAATTTCTTTTACATTTTGAATTTACCAGCACTCACATTTGTAT
TACTTTTGGGTTATACTGAGGATCTATAACTTATAGATCAATACCTGACATATATATGCAATCTCTGA
AGTCTTAGGCAGAACTAGAACATTTCTGTGAACATCAGTATAAGATATTAAATGGAAGTTTTCCTA
AGACTGAAGACAATAAAATATCATAGTCTGAAATGAATGCCAGCACACCACATACAGGATTTAAATATCT
ATACATATATATGTGTGTATTATATATATTTAATATATATCTGTGTGGATAGGAAGGTAGGGGG
AAATCAGTTTACAAATTATTAAGTATTTACCCCTTGACAAGAGTATATATTTGGAATCAGTTGGAGA
GTATTTTCAAAGATAAATGTTAGTGTCTATGAATGAATCCACCCCTACCACCACTGAGGCAGGGTAGG
AGAGGCCTGTGCTCCTCAAGCATAGTTGGAAAAGGACCTCAACAAGACCCTTCAAGAGTCTAATGTGT
GGAGACTGTTGCTTAGGGAGACCTTATGGTCTAGCTTCTGACTCACAGCTAAGTCAGGGAGACAGGTTG
GCTGCTCTGATCGTGGAGTCCAAAAGATGGCCTGCACCTGAAAAGCCTCATGAGTGTGACTTAGGGCTA
GTCTAAGAGGTCCCTGGAAGAAGAAACACTCAGTAGGAGAGAAAGCTGGAGGTACCTTCAGTGTGAATT
GGAACCTAGATTCAATCCCCCGTGGAGCAATTAACATAGGAAAGATGCCCAGTGTGAGAGTGGGGGT
GTCTCTAACAAATTACCCACCCACCTGCCCCCACCCTAAGAAAAGAAATCACATACAACCACTCAGC
TGTAACATATGCCGAGCCTAGTAACTCAGATACTAAGTTACCAGGGTACCTGGCAAGTAAGAACAATT
CCTGATTTCCCTTCCCTCTCTCTTTGCCCTCCAACCTTAGTGGCTAGCAAGATGGGAGAGGAGG
AGAACTGTAGTGGGGAAGAAAGAGCAGCTTTCTCTCCTTTTCAGCTGCTGGATTCTCCCTCATCATA
GGCCTGAGCTGGGAATCAGGAAGAAGGATTTCTTTTAAACTGAAGTAACGTTATCATTTAATTTTAA
AACATTTTAAATTTTGACAATGTTGAGATTAGATATACTAATTTAATACTAAGATTATGTTTGCAGC
TTGAAGTGATAAGAAAACCTCTTATCTAAGAGCATCCAGGAAAGTCGGGGTTTCCCTGAACATCCTTT
TAAATCCTTTGGAAGTCAGCTTTTCAGAGAGGATTTAAAGTGTAGACTGGCCCTTCAGAAAACCTGGTTAA
TGTAAGGGTTTCCTATGCAGACTTGGGACTATACCTTGTGTGGAAGAGAGAAAATAAGATTATCTTAC
ATTTTCCCATTCCTTTTCAAAGAAAGCTCAGCTAGCATGAAAGTTAAATTCAAAACGTAATGGGT
ATTATTTGCATATTTCAAATCTAGTGCATATCATGTAAGTACTGAATTTATGTTATTTCAAAATG
ACAAAGCTGGATTTTCTTTTTCGAATTTTCAAAAATTAATTTTCCCTTGGAACTTTTGGTTGGGCTT
TAAGAGTTTAGGCTTTTCATCACAAAGAGAGGACAGCCTTGAAGATTAAAGTGTGTGGCTCTTCTCAAGA
TGTTCTTAGTCCAGCAAGGATTCTATGCATATTTGGGCTTCCCTCTGTCTCATAACCTGTATTTCTTG

B

FIG. 16B(2)

A

B

DEC 27 2002

09726552 111102

192/223

B

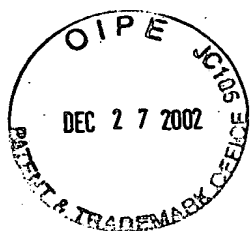
ATATTCTATTATATCTGTAAAGATTTTTTTTTTAAAGGAAAAATCTTCCATGGTTGAAGGACATGTC
AAAAATAGAGGATACAGTTTATATCAAGGAAGTTTCATGATATGACTGTAGAAGCTCATTTGACTTA
AGACACATCATTTCCCTCATGGAAGTGTAAACAGATCTGTACAATAAGTTGGCAATCTTTGTGTA
CAGTTTTTTCTCCTGCTCTAAAGAAAGTGATATTTCAAAATGTGAATGTCAGCAGTCAGAAAAATAG
TATTTTTTAACTTCGTTTTCAAGTCCTCAAAAACCTGTACCTAATCATGAATTTTTTTTCCACAGA
TTGTTTTCTCTCCCTCCAGAAACTTTGAAGTTTTTCTACATGACACCGACCTATGCTTTTTT
TAATTACACAGAAATGAAAGAAAAAGTGTGTGATCGTTAACCAATATATGAAATCTTTAAGCTG
TATTTTTTAACTTTGTTTGCAAGAGGCCATTCCTTTGGTTAAATAATTTGTATTACACAGT
TTCCTTGCTCATATTATCAAGGGGAAATTTAGAAAATTTAAAGGAAGCTCTAGGCAATGTTTCA
TCCCTGAATCTTTGGAGAGTTATAAAAACAACACAGATTACTGAACCTGTAGAGAACCAATCGTGAAGT
CATTACATCTAAGCATAAGCAAAATCTCCTCTTGGATCATTAAGTTATAGAAAGAAAGAACCTGCAC
TTTGAAATTTAAATAAAGCTTGGTAACCTTGTAAAGTCAAAACACGTAAAAATTTTACAATTCAGGAATATCG
ATAGCAGTTGAGTTTAATAGACTTCTCACATTCCAAATTTAAAGCTTCTCTCTGTGCTAATAGAGAT
ACAATAGCAGTAGGCGTTTAAAGAAATGAATCAACAATTTTAAACTATAATGTGTTTTTATTTCATCT
CCCTTATTCACATATATTGTTTTGTTTGTAGAAAGAGTTCTGCTCTGTGCCCCAGGCAGGAGTGTCTGT
GGCAGCATCTCAGCTCACCGCAACCTCTGCCCTCCGGGTTCAAGCGATTCTCTTGCTCAGCCTCCTGA
GTAGCTGCGATTACAGGCGTGCGCCAGCAACCCCGGCTAATTTTGTATTTTGTAGAGACAGGGTTT
CACCACGTTGGCCAGTTGGTCTCGAACCCCTGATCTCAAGTGATCAGCCCCGCTCGGCTCCCAAAGT
GCTGGGATTACAGGCGTGAGCCATCACCTCTGCGCCCTTATTCGCATACAATTTAAAAATCATCACAGAA
GGTTTGAAGAAGGAAGGGCAGAAAAATTACCTACTTTTCTCTCCCCAGCGATCTCCTTCAAATCTGT
GCCTTTTCTCAGGCCCCAGGCTCAATTTACTGAGCAGTCACACCTCACAGAGGGAGGTCTGGGCAATC
CACTCTTGGTCACAGGAAAGCCATTGACCCCTCCACTTCTCTCTCCACCTTGTCTCAAATCTTGAC
TTTGGGCTTTGTTCTGTTCAAAGTCCTAGGAACTGGTTTTCTTTATCAGGTTAAGTGATTAGTTCTCTT
TCCCTCTAGTTGCTCTCACTCCCTGACTCGGGGATCCACTAGTTCTAGAGCGGCCGCCACCGGTGGA
CTCACAG

C

Contig 2 (18457 bp)

GAGGGGGGAACCCCTTTCCAAAAAAGAAACAAAGACAGGATAAACATTCTAGATAGTCTCTATA
ATGGTCATGATTAAAGACAATAAAATAGTCTGAAATTTGTCAATATATATAATAAATTTATTTGGCCA
TTCTGCCAAGTAGCAGACACCTGTCAATCTGCCCCACTCAGCACCTCTCTTTCTTTAGGGAAATGCTAC
CCACTCTTGCATGGGTTCTGGATGGAACACTGTTGATCACAGTGTTTTCACTCCCCCATTTTGCCTCACCA

FIG. 16B(3)



09720552 . 442702

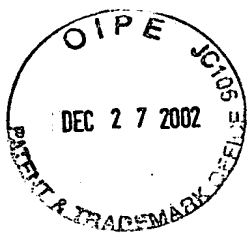
193/223

C

GAGGTAGACAGAAGACCCCAAGCCAGGCCAGTTACACACAATCTTCAGATAAATTACCGTATTGATCACAG
TATCACCCCACTCAAGGCTTGGTTGGAGATGAGCAGAAGAGACTAAAGCTGGTCAATTTAATTAACAC
CTGTACCCCAAGAAAGACTGTCAATGAGGCTTTTATACCGACACTCTGGTTCCATCTTCCCTGATG
CCATTCATTTGACGAACCTACCCAATCTTTCCAACAGTGTCTTTGGAGAAGAGATAGTCAGAAAAGAA
TAGAGTTGTTTCTGTCTTTGCAACCAAGGAACCTCTAAATGATAGACTTGTGCTAGGCACTTTGGTT
ATTTTATTATCTTGAATACTTCTGTGATATACTTCTTTGTGCATGCCTGTTGTACGGATGTAGCTTT
TTATATAATTTTATATAATTTCTCAGAAAGTGGAATTACTTAGTCAAAAGGTATGAACATTTTCTGATTC
TTAATATAAATTGTGCAATGCTTTTAAAGAGGATTATACCAAGTTTACATTTTGTGTTATATAATAACAG
AAAGTACTACTGAAAAAATATTACAAAAATTTGTCTCTCTGTTTCAAGGAGACCTTGTAAATAGATGATAA
AGTACTTGAATAGGAACATAGAGCATTTTCAGTTTAAATAATTTCAATTTGGTTATTTACGGAATCCT
TAGAATTATGCCAGACATTTATAGATGATCTGTACCAACCTAGGTGTTGTTACATAAATTTGCTAGGGCTT
AACTGGCTTAAATCTATAATAGAAAGATGACACTTACTGAATGTTTAAATATACACTTTGTACGGGCTT
TGTATTATTTCTATGACATCTTCAAAATGACCTTACTTTCTTCTTATTTTATAAGTAAGGACAGGAGCTTC
AAGAACATGACTAATTTCCCAAGGCTGTACCAAGCCAGAACCCTAATCTATAAGGCTTTTAAACCT
GCATTTCAAACTGCATCTCGGCCATCTTATTTCTACAGAACTTAAAGTTAGAAAGCCAGATTGGAGTC
CCAAATTCACCACTTAGTAACCAAGACAACTTGAGGAATTCACCTCAACGCTTTTGAATCTTCAATTTCT
AATCTTTAAACCTAAACAATAACTTGTCTACCTATGTCTCAAGATTTCTGAGGCACATAGAGAT
AGTGTGAAGAGTGTGTACAGATGTCAAGTGTAGCGTGATTACTTAGATCCCTGAACACCATGGATG
AATGTCTCTGACTGCTATTAGAGGTCATAAAGATATTGGGGCCAGGTACATTTGGCTTATTCCTATAAT
GCCAGCACTTTGGAGCCTGAGACAGGAGGATCACTCGAGGCCACGAGTTCAGACCCGCCCTGGGCAAC
ATAGTGAGACCCCTTCTCTACAAAAAAGAGCAGCCACGTGTAGTGGCACACACCTGTAGTCCCACAT
ACTCAGGAGGTTGAGTTGGAGGATAACTTTAGTCCAGGAGTTTCAAGGTGCAGTGAGCTGTGATTGCA
CCACTGACTCTAACCCTGGACAGCAGAGTGAGACCCCTGTCTTAAAAAAGAAAAAATAATAAT
AATAAAGAAATAATGGGGCTTGGGATACCCACTCTCTCTCTGCTGAGTTGTGAAGCAGTTGAGT
TACATATGCATGTCCAATGGATGAGTTGAAAAATATCAACTGGATTGGAATGTGGCTTACTTGGCTGGC
CACAATGAGCTTCGTAAACACTTCTGTACAGGTTGAGAAGACAACTTCTCACCCAGTCACTGGCAGAG
CTGGACACTCTGTGTCTCTCCACAGAACACCTCTTACTGAGGTGGATGAAAAAGTCAACCGA
GAACAGGCTACTCCAAAAAGCAGAGCACCAAGGCCACCGCTGGTCAAGTCCCCCTTCTTAAGTAAACA
ATCAGGTAATTCATTCGGGACAAAGCCAGAGAGGTTGTTGGAGAAAGAGAGGCGAGTTTCTCCCAAG
TTTTCTCTGGAATTTTATGGGAATATGAGGTTTAGGGGAATAAGACTTCCCTTAAACAGTGAAGAAT
CCCCAGCTCTATTGGTAATAGGAAATCGCTTACAAGGATCATGGGGAGTATTTCTCTCAGCTCGTTCTGC

D

FIG. 16B(4)



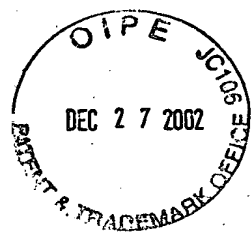
09700552-142702

194/223

D
CTCCTACTTGGCTGAGTGGAAATGGAACCATCTGTGGCTGCTGCATATGATATTGTCAACTTTGTCAATTC
CACACCCACTCCTTGACGCCCTACCATGTGGTCATAAGACTCCCTTTAAAGTGTTCCTTTAAAAACAA
AATGTGTTTTGTTCTATAAAATACAGCTCAATGTCAGAACCTTGTCTTTGTTGCTCTCTGATGTAAC
CCTTTCACAATGTTTGGCAGCTTATTCTCTCTATTTCCCTGTAGGTCCTCATCCAGGCCAAAGTGAGT
GCCAGCCTCATTTGGCAGCAGATGCCCTGTGGAAAGGCAGAGGAGACGAGACTAATTGTAACCTTG
TGATTAGCTGTCAATGCTGCTGCTGCTCAATAGCGCTCAATAAAGCCAGAAAGGCCAAGCGTTCCGCT
TCTGCATACCTGATGCTGAGTCAGATTTCTCAGTGCAGAAAGGCTTTCTAGGCAGTCAATTTTAGAATA
TTAGTCTTGGTCTTAAGTGGTTAAATCCCTAGCTGGTCTTTAATCTGAGCCTGGAGAAATTTAGTTAT
GGCTGACATCTCTGCTGATATTTTGGCCTCAATATATATATGCTCTTCTCCATCTCTTAGATCCCCTGA
ATCATAGAGATATATATGTTATATAATCAACTGTCTCCAGTCTCTAAGAGTGATAAGTACACATTTGTGT
CAGGTTGAGGGACAGGAGAACTTTCAAAAGCCTTTCTTGCCCTTTTCTCCTTCTCACTGCCCTCCCCT
AAGTCCAGCCACTTATTATTCAGCTGACACTATCATCATGACCATGAGGTCTTTTGGGGCTACCCCTGGT
TCGGATCCTTCTGGAGGTTTGTGCTTAACTCTGTCTTCACTGCTATGAGTGTCTTTTCAATAAAGTTT
CTATTTTGGCTAAAGTTGGCCAGAACTCTCTTGTAAACCAAGAAACAAATAAATACCAGCTTGCAATGT
TCTATGTTGCTTCCACCAACTTATGCAGCACTTCTCTATCTAATCCACCTACTAGTCTTTTCTTTT
ATTTTTTTTGAGACGGAGTCTGCTCTGTGCTCAGGATGGAGTGCAATGGTGCAATCTCGGCTCACTG
CAACCTCTGCCCTCCCGGTTCAAGCAATTTCCCGGCTCAGCCTCTGAGTAGCTGGGACTACAGGTGC
ATGCCACCACTCGGCTAATTTTGTATTTTAGGAGAGAGAGGTTTCAACCATGTTGCCAGGCTGGT
CACGAACCTCTGAGCTCAGGCAATCCGCCCTCCTCGGCTCCCAAGTGTCTGGGATACAGGAGTGAGC
CACCTCACCTGGCCCGACCTACTAGTCTTTAGTGTCTTCTTCTTCTATTTGGGTAATTTGCTGTTTAT
ATGCATGTCTGTTTCTCAATAAATGTTGCTCTCTCAAGGATTTGGCCCATGTTCTATCCATCTG
TAGATATCACAGCACCTAGCAGTGTCTTTACAGAGGAAGTACACAACTGGCATTTATTGATTCTGCT
CCATTTTTCTCTTTATCCCCAGCATTTCTCAATAATTTCAAAACATCTCCATTGGAGTACCCGGAGAA
AGCAGGTAGCTTTACTTGACGCTATGTTTCTATCCCCATAGTAACATAAAGAGGACCCAGAGAAACATG
TTTAAATGCTGTCTGTTATCAGGACCTCAGCCTCTGATGCTCCGTGGCTTGGGGTTATTGCTTGAT
CATCTCTCCCCAACCTACACTGTGTACCTATGCTAGTCTCTTCATGAGGACTAAGCCCCCATAGTAAAA
GGGCTAGATAAATAGAAATCATTTTATGTAATTATAAGAAATGAGAATACTGAGTATTCTGTTGTTGT
TTAGGATAAGCACATCTTTATTTGATGAGAAAAAGAAAAAGAGAGTGAAAAATATATTAAACGTGCATA
TTGTTCAGAAACCTTGGATTGCAAGTGACAGAAACTCAATTCAAACCAACGTAGTCAAAAGGAAAAATA
TATTGGCTCATGTAAACCTTCTCACAGAGAGGCGAGGATGGAAGGGCTTTGGGAAACAAGAGAAATTGTTT
TCAAAATCTAGGAATACTAGGATTAGTCCAGGATGGGTACCTTCTGTCCTGAGGTGGTGGTAGCGA
TGGTAGAGTCTTATGGGAGGAAGAGTGCATGTTAGGATGAAGGTAGGGCTAAGCAAAACAAGGGCAAGG

E

FIG. 16B(5)



09720552 . 147202

195/223

E

GCCACTATATCATGCTAAAAATGGTTTTTTTGTATGTCTTCTTAATTTCACAAATGCTTCCAAACAAG
TAGCACACAGGAAAAAGAACATAGGACTCTACTGGTGGTGCTTTTATCTTAAAGCCTTGACTTGCTT
TTCACAGCTTACTCACTGCTGTACCTGAGGCCATATGCCCTGTAAAAGCTTCTGCAGGGTTTCTACTA
AGCTGGGTTCCCTTATAIGGCTCCTCCCAATTTCTGTGGCTCACTCTAGTGATCTTTCTCTTTCCCTCA
CCTCTGGGACTGGTGGCTGTTGTATGGACTGCCCTTAGCTTTCCTTGGGTTTTTCTCTGGGACAATG
TCTTCAGATTATCCTAGACCAATAAACTACAGCCACTGGGCCAGGCTCTTCTCTCCAAGCTGGAGCA
TGTTCCAGGGCTCTTCACCTTAGTTTAGTCAAGCATTTCTGGCAAAAGAAAGGCTAGTTAAACAATA
GACATTCTAGCAATTGATTCTTTTGGACATGTTGAAGATCTATTACATTTTGTAAATTAAGCATTC
CCTATGGAACCAACACGAACTAAGCTGCTCCTGGAATGCAGGTGGCTCCTCAATACAGGATGTTCT
AGAGAGCTGTATTTTGGGCACTTAACCTATTCTCCACTACTTAGGGCACAGCACTGAAATTAACACCACT
AAGTTTGTCAATGTCATGTAGTTAGTCTCAGGCAGTGCAGCCTCAGGAGTGAACCTGACCTCTTATGTG
TGTCAGGCTTTCTCTTCCAGAACTCAGCTGTGTTTTCTGCTGACTCTCCATAGGAACATCAGTCCTG
AATCCTCAGACCACTCTGGAGTAGTAAGTGTCTGACAGTCTCCTAGAGTTGTCTACCGCTGGATCT
CCAAAGCGTGTGACACACCGTGAGAGAGAAATGAGAAAGCTGGGCTCTTCAGGTAATCTTGTCTTTTC
ACAAGCCCCGTAATTTTACTGCATAATTTTGAATTCACCTGATAATTTCTACAAATTTTCCCATAAAGT
CATCTACACACAATACCTCTCATGCAACACTTGGCTTGGCTAATACATATCTATTTATGAGAGCTGTGC
TTCTTAAGCGTAATGTTTATATGCACTAAGGCTCTTGGCTTACATATAAAAGGGGATTTGAGCAATG
TGATACAGAAGTCTTTTCTCCACAGTCTCATATGTAAAGAATTCATTAGATTGGCTGAAATAGACTGA
TCTGTCCATTTCTCTGCTCACTTATCATAGGAAGTCACTAGCTAAGGAACAAAACCTACAATCTATGT
AATTAGAAGAACAAAGCTGGTTTTGCTCAATATAAAATAAGAAAAGAACCATGTGAAAGTCAAAATA
TTTGTTTAATCAGGTCATTGAGAACTATTA: AAAAGTATTTGAATTTCTTATGATGAGAACTATCTTG
ACTCAAGTGGACAGTGGTGAAGCTTTTGGGCTGTGGTCCCTACGTAGAAAGGAGGCTTTGTCAATAAAGT
CTTATATGGTACAGGTGCCAAGTTAAGTGCCCAAGCTTGMTCTTAAAGCATACTGGATTTTGTGTAAGTC
ACTTTTAGTGAAGTGAAGGAATAAAACAATCCCTCTGGGAGAACTTCTCCTCCATCCTTGGTGAAGTC
ATTCTGCCAGAAATCTATCTGGTAGTTACCTTCTCCGATTCATTAAATGTTGTCCCATGGTCCGACATG
GGTAATTTTCTCTCATTTTGTGATTAGTTCCACTACAAGGAATTAATATTTCAACTTCTTGCCCTCTGG
GATATACTCAGCCTTATCACAGAGCTCCTCCAGGGAAGGAACCTTAGATTCTTTGAAGAACTTCCCTGCT
CTTACCCAAACCGATTGAGTTGTTAATTTCTGCTCCACTTGTCTCCATTTTCAGTGCAGGAGAAAAGCAT
TTGTGGCAAGTCTGACCTTACAAAGGCTGTTAATGCTCAATAACTGTGAGGACCTGCTATAAGTCAATG
CCTTTTAAGAAAAAATACACACATGCACACACTCAGCACAAAGACTGCAACACAACTGTGATGGCAGCTT
GCATATTGAACCAAGCTGTTTCCCTAAAAACATTTGATTCGGCATCCTTTGTAGACAGTAATGCAAAAGA

F

FIG. 16B(6)

F

DEC 27 2002

196/223

0972000000 1122702

F

CTTAGGTTGGAAGAAGTGCATTAGGTTTTGATTAACGATTGGATGAGGGCCAGTTAAATTTTAAATCTG
AATGAGCTTGCTGACTCAGGAGCCTTAGCAGCATAAATGGACAGACAGATCCTCAAAAGCTTTCATTAAGAAG
GGTTTCTGGTAACCTGATGCTARAGAAATGAGTTGAAATACAAATCACTGAACCACTCAGCTTTCATCT
AAAACAGAATATGTAATCTCAAAGAACTCAACTGGTCTCTTGAATATTCAGGTAAATTAATGTAA
GAAGCTAGAGCTTAAATATTTTGAGGAAGGAGCCCTCCTGTAGCTTTGTGACTATATCACTTTATCCT
TTTGAATGCCGTATTTAAATATGTTAATTTGCAATTTAAGTATAGCTGGAGTCACCGATCTGCTGAAAAC
AAACTCTASAATGGTTTGTGGAGGTGCTCAGGATGTATCAGAGACTGATTTGATTTGCATTTTATTTT
TAACTTTAGTTCCCTCTCTGAACCTCTGCCTTCTCATGTTGTTTTTTTWTGTTGTTGCTTAATACAGT
CATGTGCCACCTAATGACAGGGATATGTTCTGAGAAATGCATTATTAGGTGATTTTGCCATTGTGCAAA
CATCAGTGTACTTACACAAACCTAGATGGCATAGCCCTACTACACACGCTGCTGCTATATGGTAGAGCCT
ATTGCTTCCAGACTACAAACCTGTATAGCATGTTACTGTACTAAGTGTAGGCACTGTAACACTGG
TATTTGTGATCTAAACCTATCTAAACATAGAAAAGGTACAAATAAAATACAGTATTATAATCTTATGG
GACCACCTGCTATATATGCAATCCATGCTGACTGAAACATTTATGTTGTCATGACTATAATAGGATCAA
ACTATGCCCTTTGCAGAAATCCCCCTGGAAAGCCTCTGAAACTACCCCTGATCTTAGAGGCAGTTTATATAA
ATCACGGCCAATGATTTCTCAGCCTTTGGGTTGTGCCAGAGATGTGTCCGCTCTCCTTTTGCAATGACCC
TAGAGGTAAGGTGCTCTTCTCTCTCTCTCTCATGAAAAAATGTAATGTTGTATTTTAGCTTCTT
TTCCAGTCTAGTAATATCTTGTAAATTTACAAGATTGTAGCGGTGCCCTCCAAAAGGGGATAGCAATA
GTTACTTTGAAAAATGGGTGAGTTCTTTGCAACCATCTCTGAGTTGAACAGTTCTTGTATAATCTGTCTT
CCCAGTTAGGCTGTGAGCCGCCCTGAAGGCAGCAAGTGATCTTCACTCTCTCTCTGATCTCCTCAGCCA
CTCTTCTGCCCCACAATTCAAAAATCAGTTACCAAGCCATTGTAATTCCTTTTCTGAAATGTGTAGTA
GACTCCCTTTTAGGGTATTTGCCCAGTTCAAAAAGACCCCTGCCCTCTTTGGAAATCTGTCTTGCAGCC
ATATATGGTTTTTGTGTTGTTTGTGAGACAGAGTTTCACTCTGTGCGCCAGGCTGGAGTGCAGT
GGTGCGATCTCGGCTCACTGCAAGCTCCCCCTCCCGGTTTCACGCCATTCTCCTGCCCTCAGCCTCCCAA
GTAGCTGGGACTACAGGCGCTGCCACCATACCCAGTTAATTTTTTGTATTTTAGTAGAGACGGCT
TTCACCATGTTAGCCAGGATGGTCTCGATCTCCTGACCTCGTGATCTGCCCGCTTTGGCCTCCCAAAAGT
GCTGGGATTACAGGCGTGAGCCACTGCACCCGGCAGCCATATATGTTCTATATGACTCTTCTGAGACA
ATAGCTGATTAGAACAGTATTAGAACTGTGATTTCTGAGACAATAGCTGATTTCTGAGACAATAGCTG
ATTAGAACAGTTGCCACGAGCTGGACCAATCATATTAAATTTCTATCTCTCTCTTTTGTCTCTCGAAA
TCTCAAATTTGAGATTCAGAAACAGCTATGTAGTCTCTGTTTGTGGCTAGAACTGTAACATATGAACCCA
GAGCTAGAGAGATGCAATATTCTATCAAGCAGAGAGAGAGAGGAGGAGCCGGTCGGCACAGACGGAA
TGCAGTAGCACACAGAGAGAGCAGACACTCGGAGATGTCTGACACCTTTCTGCTTAGATTCCAGTCAG
TTCAGAGGCCCAGACGCATTCCTGTCTGGAAGCATTTCTGATCCTGTTTGTAAATCAACAATAAATCCC

G

FIG. 16B(7)

G

G

TTGCCACCCCTCTTTGCGTGTAGCTTAAGTTGTCTTGCTCTTAAAAATCTAAAGAGTTCTAAATGATAT
GAAATGTCTGTATACAGAAAGTAGAATGACAAATGCCAGGGCTGAGAGGAGAGGAAATGGAAAAATT
GCTCAATGGTTATAGTTTTAGCTTTGCAAGAGGAAAAAGTTGTGGATATTGGTGGCACAACAATGCGAA
TATACTTACCACACTAGCTCTATGCTTAGATACGGTTAAGATGGTAAATTTTATGTATATATTT
TATCGCTGTTTTTAAAAAAGTTTAAAAATAGCCCTGTTGTAGTCAGCTTCCCTTGTCTTCTTACTACTGCA
GCCATATTCCAGGTCTCCATGGCCCAAGGTATGGACAACCTGTAGTCACCAAACTGGTCTCCCCACTTCCA
CCCCTTGGAATTTGGTCCCCAGCAATCTACCCCTACATGCATGGAGCAATCAATATTACCCATAAAGCAC
TAACGGCTGTGCTGTACTCCAAAATGCAAACTTTCATGGTGTCCCATTTGAATTCAGGATCAAGTTCATAC
TCCCCAGCTTGTACATACAGGACCCAGTGATCCCTTTCCAACCTTCTGACCTACTGATTCACAGTAGGAAG
CAACCCTAGCAAGACTGGTCTGCCTCATCCCAGAACAGTACTTACTCATGCTGTTTCTTGGCCATGAT
TACCTTCCTTCTCCTCACCATCTTATCTTTCTTCTTCACTTGATCTTAGTCCAAATGCCGAGAAAGCAAT
CTTATCTTACTTTCAAAGCCCAAGTTTCAGACCCCATCAATCTATAAAACATTTCTGACCAACACTAGTCC
TCCATGGACATTTATTTGAATTGAACCTTCTTAGCATTTAAATATACACAGTTTCTTATTCTATCTGTCTT
GTTCTTCTGCTAGTTTATAAATTGCTTGATTATAGAACATGAGCTTGATAATCTTTGATTTTTTCCCTGGA
TACTGTGTTCTTGTAGGCTGTTAATAATGCTTGTGAATGAAATGAGAAATGAAGAACGGCTGCTTTA
CCAGTTTGTCTCTTGTGCCAACTTTTACATGGATTTTACACCTCAACTTTTACACAAATGATTAAA
TATACCTAATTGTATCATCCCAACAACACTAGTAAATATATATATGATCATATTATCCTCATACTACAGATGA
GGAACACAGGCACACATCGTTTGTGTTTTTTTTTTTGTAGACGGAGTCTTGCTCTGTGCCCCAGGCT
GGAGTACAGTAGCACGATCTTGGCTCACTGCAACCTCTGCTCCCTGGTTCAGGCCATTTCTCTGCTCA
GCCTCCCGAGTAGCTGGGACTACAGGCATGTGCCACAATGCCCTGGCTAATTTTGTACTTTCAGTAGAG
ATGGGTTTCACTATGTTGGCCAGGCTGATCTCGAATCTCTGACCTGATGATCTGCCCTGCTTCGGACTC
CCAAAGTGTGGGATTACAAGCATGAACCACTGTGCTGGGCCAAGCACACATAGTTAAATAACTTGCAA
AAAAAATAAATCGTATCTATTTGTAGGAGGCAGAGTCGTGATTCTGAGCTGAATCTATTGGCTCCTA
AGCTTATGCTTTTCTACAGTATCACCACATATCCCATACTCTATTGTTATTTGTTGGCTTATTGCTG
TTTTTCTGTGAATTTTAACTTCCCAAAAGCAGGAATCTTATCTCAGTATATCACAGAGATCACTAA
GTATCTATAGAGGAAAGGAGAGAGAAAGGAAAGAAAGGAAAGGAAAGGAAAGGAGGAAAGGAAAGGAA
GAAGGAAAGGAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAGGAAAG
GAAGGAAAGGAAAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG
AAACTCTGGAAAGGAGCTTGTCTTACTCCTAAGCTTGGTAAAGATCAGTCTTGCAAGGGGCTTGACTAG
AAAACACTGGCTTATCTCACTGAACCATATTTCCCAATGTCAATTGACTCTTCTTCCCTGGGAGTAATC
AACCATGTGTTCACTGTATGGATCAGAGTTGATGAATATTTCTTGCCTCAGTCTCTTTTGGCCAG

H

FIG. 16B(8)

H

0972952 122702



09720552, 122702

199/223

ACTTGGCTGGTGAGTTTGGAAAGCTTGAATAGCAATGATTATAATCTTGGTGACAGAAGCAGCCAGTG
AAATTCGAAATGCATATTTCTGTTCTCTACTTCCAGAGGGTCTGATTGAGTTTGCCTGGGAAGGGCC
TAAGAAATGGAATCTTTTTATTACACACAGGTGATTTGAAGCATGGGGTCTACTGAGTATGCTTATG
AAACATTAACTTTAGGTCCTAGGCACCTGGCTTAGTTGACTGTGAGAACTGAAGCACAAAATTTGTGTGA
CCAAGTTCTTCTGAGCCTCAGTTTCTCACCTGAAAATGAATGATGATGATAAAAATAAAGTAGGCTC
CATGCCAAGTGATTTACATATTTCCCTCAATCATCTTTCTTACAAACCTAGGAGTTCCGAGGCATTG
TTGTTCTCTATGCTATGGGACTCAAAACCAATCATTTCTACTCACTCTTCTTCTTCAATAATTGTCAGGAA
GATTAGACATAGAAAGTATCTAGCACATATTTCTGATGTTGAAGGAATAGCAGCAGCTGTTATAACTAC
TACTAAACTGACAAATACAGCCATACAGCCACCACCTAAATGYTGGGTTGAATTCAGATAATCTCTA
AGGTTCTTCCAGCTCCACCATACCTGATTTACAGCATTTCAAATATATGCTGATTTGTGGGGGGGT
TCCTAGAAAGAGTGTGGCAGTAACTGAACCTCAACTATACAAAAGACCGAAATTTCTTCTTAGTTGGAGA
TTTATTGATTTTGTAGTGAGTTTATAGACAAAACGAGGAAGATACAGAGAAAAGAGAGAATTA
CTGTGCTTTGATAGTGGCTATGGTGATTTTATTTTAAATTTTATTTTATACATTAAATGT
GGTTTCTATAAACAACACAAATTTAGAATAAAAGTAAGATATTTCTCTTGTGCTTCCAAATTTACCATAT
ACTTCTTAAATGATTTGTATCATATCATCAGCTGTAAGTTTACTATTAAAAAAATCAACAAAAGAA
CAATATCAGAGCTAAAGGACTTCAGGCTGATGAACCTAAGTCTAGTTTCTGTGCTCACTAGCCTTGGC
TTATCCCAAAATATTAAAAAGTAAATATGATCCAATCTGCATCTCTTGACATGTCATGTTTGTAAAT
AGAAAGTTCTTGGAAACAATCTGTAACATCGTTGAAGTACTTCAATCTTGGGCATTAATTTTAT
CTTCTGTTCCCTCATATCATTTAAACAGTACCTTCCACTACATTCAGTCAACTATGGAGGACTAAT
GCTCTATTTTCTTATGTTGAACATGAAGCATAAACATGTACAGCTCTGAACCTGAGTTTCTTCTGCTT
TAGAAATAAGAGGTTGATGAAGAGGAAATCCCTGAGACTCTGTAAACCTWACCTGCAGGTATGAGA
ATACAATCTGTGTTTWTATATKGTATTTCTTWAGCAAAATATAGTAAATTTAGTATTTTCTTTTCAT
TTGCTCTCGAATATCCTTTAGTAACAGAGTGAACCTGTATGTCCATATTTTGGGTTTAAAGAACATGG
TTACTGTAGCAAAAGAGGGCTAGCCCATGTATTAAAGTCCCTGGATTATACTGTGCTCACAGGAGAGC
ATGGGTTTGAAGATGAGGCTGCATAGTAAAGTAGGTAAAGTTTGGACCTTGGGGCCAAACTGCCTAAG
CTCAATCATGGTCTGCCAGTACTCTGTTCCGACCTTTAGCAAGTACTTAATCCTTGTAGACCTCT
GATTTGGTCTCTTCAAAATAGGATAGCAATAATGCCTGTCTTATAGAGACATTTGTGAGGATTCATGA
ATTGATATTTGTAGAAGAATATTGAGTTGGTTTGTCTAGAAGATATTAAAGTCCGAGTCTTTCTAAAT
AACTAAATGCTACAAAAGCAAAATAGCCATTCTGCAAGAGCAGTGATTGAAGCAGGAAAATGCCCTG
CCTTCATAAAGCTTACATTATAAGGAGAGAAAAATAAGCAAAACAACTACGTGGTATATATGTAAAT
AAAAATAAGAGGGGAAGCATGGGGTGGGCAGATATTGCAGTTATAAATAGAAATGGTCATTGGAGGC

FIG. 16B(10)



00720500 . 1100000

200/223

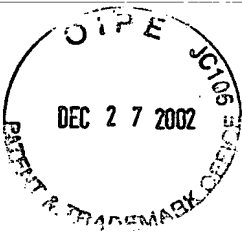
J

TTTATTGAAAAGGGGACATTTGAGCAAAGTCTTCAAGGGGGTATGGAAGTGAGCCATGTGAGTATTTTG
GTGTAGGGAAAGGAAAAACATCCTTCTACCCCTCTTAGGTTTGGTGGCTAACCTAAGAATTAACAACAACAT
AGATTAACAAAGAGAAAAGCATGCACATTTATTTAATGTTTTTATGTATACATGGGAGTCTCAGAGAAA
AATGAAGACCCAAAGAAAGACTTTATGCCCCAAAGCTTATATACATTTTTTACACAAAGAATGATAAACT
GTGGAGATGTGACAAGACAAAAGGCCTTGGCTAGAAAGCAGTAAATTTGTGGAGTAAGGGATATACAGG
CGAAACTAGTGGAAAATGAGGATGATTTTAGTTTTTTTTTACAGGTCCATTTTCGATGATAACTCCAGTC
ATCTCTGGTGATACTATTCTTCTCTTCTGGCACAAAGGAGGCCCTTTCTCATGGGAAATTTTATGAC
CTGCTTTTGGTAGAAAAGGGGAAAGTCTGAGAGCTCTTCTGCCCCCTAGTGTCTCAAGCGCCTTCAGC
TCAAAATAATCATTATGCCAAAGTGGCATATTTGAGGTGGCATGTTCTGAGCCATTTTCATGGGGTAAG
GATATTCAGGCTGAAGGAACTGGGAATGCAAGGCCCTTAGACAGGAACATGCCCTGGTATATTCAAAGA
GACATCTGGGAAGCCAAAGTAATGAATGACAGCAGAGCATGAGGTTGGGTGGCAGGAGATGAGGAGA
TGGTACAGGAGGCACAAAATCAGGCAGCATGTTATTGATCACCGGCAGAGCTCCAGGTTTCATTCCTATC
TGAGTGACATGAACGGCCATCAAAAGTGTGAGTAGAGGAGTGACTGTGTTTAGAATGGACTGCAGGG
GAATAAGGTAGAAGCGGGAAGACCAGTTAGAAAATGTTAGAGATGATAGTGGCTTAGACCTGAGTGAC
AGCAGTAGAATAGGTAAAGAGATGGATTATGAGTGTCTGGCTGATTCACTCTTATATCCCCCTATGCTA
AGGCATCATGCTTGGCACATAGTAGGGACTCAATAAATACTTGCAGAGCGAATGAATAAATGGGAGTTT
AACTTGGGTAAAGGCAACTTCTTAAGGCTCTGTTTCTCATCTCTAAAATGAGGTAAGAAAATATTA
ATAGATCTACCTCCAACGGTTATTGTGGAGATTAAATGAGGTCACTCCCATGCTTGCCTTAGCATAGTA
ACTGAAACATAAGATAGGGCTAAGATGTATACATACACATAAATAAAGCATTTTTCGAAGAGTTTAC
CTTTGGAGACATGGAGGAAGGTAGACTTTTATTCTTCAATTTTATGAACATAAAGCAAAAGAAAGAAACA
AGTGTGAAATTAATGAGTCATTTTCAAGTTCTTTTGTACTTTTCACTACCATTTTGGAAATTTTCTATA
ATGAATATGCGAGGCAAAAGACAGAAATGAAAGGATAAGATCACTCAGAAATTTTCAGGTTTTTATAAGCA
TCAGAAATGTAAAGACTTTTCTGCTACTGCAATGGCCCATTTCTCTGACTCTTTGAATGTGGTATTAT
TCTCATCTTTCTCCCTCCTCTCTCTTTTGGTTAAAGTAAGAGAGAGCTTTTGAAGCTATTATGGAAC
AAGAACACAGCCTAGTTTCATCCTCACATTTTGGAGCCTCTTATTCCTTCCAAAGAACACACATCTA
TTTAGTGGCTAAGAGTCTCTTGAGCTGAACCATTCATCACCATAAATACATTTCAAACTGTCTGAGGTA
TACATTATAACTAAGAAAATGGGTTCTCATTTGGAATTTACAAACTAAATATTCAAGAAGGGTTCTG
ATGCTTTTAAATAGGGGGCCCAACAAAGGTAAAGTAAGACATGTGGTTGAAGACACAGGAAAGGCA
GAGGTACCAGAAAAGTTGGTTGTACGCCTGATCTTAGGGCCTCATAAAGAAATAATATGGCAGAAT
GAGCCCTAAGAAGCAAGCACCTTAGCATGGCTCTCCCTGGACAAAGTGGAGAGGCCCTTCCACCCCTAAC
TTATCCCTATTGTCCTGGTCTTCAGTCTTTCTGCTGTGTTGCTTTCTGCTGTTGTTAATATACTTGTTC
TAAGGTTTTACCCCTGCTGACTTTTAGCTCTTCTTGCTAAGATTCTCTGGCTGTACATTAGAAAACCTCT

K

FIG. 16B(11)

K



00720552 . 122702

201/223

K

GAGCAACTAAACACAAAAAATATTTGGCAGGGGGATAGGGGGTGCTTCTAGGCCCTAACTAAGACCTG
TTAAATTAGAGTCTCTTTTCGGGTGGCTCCTGGGCATTTGGGGTTTTTTTGTCTCTTTTCTTTTCTTTT
AAATCTAAAGCTTCCAGTTGATTCCAATATGTAGCCAGAATTGAGACCAGAAAGCTGTTAATACCCAA
GTAGTATACTAATAATTAATGATCATAATAGATTAACTAACTAATGAATGAATTTAAATGTGT
AGCTGATTTAATTCTCAATGACTCTGAGGCAGTTACTATTATTATTATTAATGTACCCCTTCTACAGATGAA
GAATCAAGATACCAAAAAATCTACATAAATTTGGCAAAACAAGTAAATGCTAAAGTTGGAATTCAAACACA
GGTAGTTTAGTGTCGGAGCCACACTCTTCACCAACACACTGGTGGATTGCCACCTGCAATGTTAAAA
ATCGCAGAGGATAGTGATGATACTGCAGACACACTGCCTGCATTTTATCTCCTCCTTGTAGGCTGAGC
CATTACATACCTCAGTGGTCCACACCTTAAAGGCAGGATATAAAGGTAAATATATGTACCTTCCTGATA
TGAACCTAGAGACTCCATCCCTCTTTTAAAGTAATGTAATGATTAAACAGCTTTCTGTTATTCCTTTC
AGAATCTCATTATAGATAAATTTCTGGCATAAATTAGTATCATAAGTTTCTATTATTGCTCATTAA
TCAGTATGTATGTAAGATCAAGCAGTAAGAGTTCCCCCAACCCCAAGAAATGGTCTTTCTGTTTGTG
ACAAATTATCTTGGCAATGTAATTAGCCAGTTGGGTTATTGAGGGGATCCACTAGTCTAGAGCGGC
CGCCACCGCGGTGGACTAGAT

K

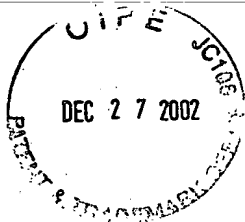
Contig 3 (11811 bp)

CCTGTTAAAGTTTACCTTGATCTTAAACTTGCCCTAACCGGATTAATTTCTGGCCAAATAGGGAGG
CTGAATGAAAGTTTACATAAACCTTAGATACTCCTAATTAACTGTTTTTTTATGCTGTTTTCTTAGGA
CACATGTTCAAGAGCATAATTAACTTTTAAAGAAGCTAGTAAGTACTGAAATAGTTTTTTAAAGTTT
TTTCTACAAGAATAGAGGAAGAAAGGAACATGGAATCTGAAGGGCTACTTAGCAAGCTGCTTATGGC
ATAATCTGGGGTGGGGTGCATAGTAAGGATTTGCAATTTTACTGAGACCGATACATGTCAAGGGAATG
GTATTTAAATTAGTGATATGTGTGATTTTCAAGGACTATAGCCCATCAACTACAATAGGCTCCAAA
AAATTCGTGGTAAATTAGCTTCTTGGAGCCTTCCAGTTTACCTACTATGTTATTTCCCACTATAAAATAT
TCTCAACTTTTGGGGTTTAGCCACTTAAGTTTTTTTATTTCTCTAATGTCTCTAGTATCTGCTTTAGT
TTCTGTCAATGCTAGACTCTGTGGTTTCAGCAGTTCAATCCATCTCTTCCAGTACTCAACCTCGTTGC
TTATAGTTTTCATTACATTCACTAGCAAAACCTTAATCTGTATGTTTGCCATACCATAGTGCTTAGA
GCATTTTTCAGAAAAGAAATCCTGGAAAAATGGATCTTATCTCACCTGGGCCCTCAGGACTGCTGGGCT
GCCTGGTGTGAGCACTTCCCGCCATTTTCTATAGCACCAGTATTATTCTTAATACTTTAAAAAACCCACC
AGGCACGGTGGCTCACGCCCTGGAATCCAGCACTTTGGAGGCCAAGGTGGCGGATCACAAAGGTGAGG
AGATCAAGACCATCCTGGCTAACACGGTGAAACCCCTGTCTGTACTAAAAATAGAAAAAATTAGCTGGG
CGTGTGGCATGCACCTGTAGTCCCAGCTGCTGGGAGGCTGAGGCAGGAGAAATGGCGTGAACCCCGGA

L

L

FIG. 16B(12)



09728552 . 122702

202/223

L

GGCGGAGCTTGCAGTGAGCCGAGATTGCACCACTGCACTCCAGCCTGGGTGACAGAGCGAGACTCCGTC
TCAAAAAAAGTAATAAAAAATAAAAAACCATAATCCCACTATATCTCCCCCTTCTCTCTTTGGCCTGTG
ATCTTGCTGCATACTTATGGGGAATCTTAAAGATGTCAGATTTCAGTTCTCTCACTTTCTACAACCTT
CTCCCACTTTTGCCCTTCTTATGTACCTTCCCTTCCATCTGATTCCTTATCAGTATTACACAT
GATTAGTTCTTGCCCTAACCTAATAGACCTTTCTTGAGTGCAATCAGTGGCTATTTTGCTAGGGTAT
AAAAATTACCTATCTAATCACCTTGACAAAGTTACCTGTTATTTCCAATAACTTACTTCTATGGATT
CTTGAGATTCTCTTTTCTTTTAAATTTTCTTTTAAATTTTTCAGATGTTTCTCGCTTTGTCAACCATGC
CTGGCCTAAATCTCGTAGGTTTCTATGTAAACAATCAGATTTTCTGCAAGTATTAGTCTCCTTTCTA
ATTGTTATAATTTTAAATTTCTTTTAAATTTTTCGTAGAGACAAGTTTTCGTATGTTGTCC
AGCCTGGTCTTGAACTCCTGGCTCAAGCAATCCTCCCATCTCAGCCTCCCAAGTCCCATACAGTGG
CATGAGCCACTGIGCCTGGCCAAATTTCTTTTCTGTTGCGAAGGCAGACTTTTCATAACAATACTGAAT
AGAAAGTAGATAGATTACTTTATTTCTGATTTTCAAAAGGAATGCTTTCCGTTTCTCTCTGTTGAAGAT
AATTGCGTATTGTTTTTTTTTAAATAGTAACCTTTATCAGGTTAAGGAAGGTTTCTTCTATTTCTAT
TTAAAAGGATTTTTTAAATCTTGAATTCATATGTTTTTATCTAATGCATTTTCTACATCAGTTGAAAT
GGTTGATGAACCTCTTTAATATGGTGAATTAATTTATAGATTTTATGTTAAATAATCCTTGTATAT
CTTGATAAACTCAACTGGATCATGATTTATCTTTTATATGCTAGATTCATTTGTTGATACCTTTGT
TATGATTTTGAATATATATTATGTAAGAGTGGCTGTGATTTCTTCTTGTAAATGTTTCTGTCT
CAGTTTGGTGGCTGGTCTCTCTCTAGAAAGTGGAACTAGTCACTCTTGTGTTTCTCACC
TATAATAGCATCTGGGTCAGTGTGTTTTATGTGGGACAAATTTGAACCTTGTTGTTCAACCTCTTTAAT
GTAAGAATATTCAGGCTTTTGTCTCTGCGTAGTTTTTATTTCTTTCTAGAGATTCTGTTCAAT
TTTCTTAGTTTTTATTTGCCATATAATTGGGATAATCTGTTTTTATCTGCTACTTCTGTAATATTCTC
ACATTTGATTTATAATATACTTGGGCGCAGGCTGCTGGCTCACACCTGTAATCCAGCACCTTTGG
GAGGCCGAGGCGGATCACGAGGTCAAGAGATCGAGACCATCTGGCCCATGGTGAACCCCGTCT
CTACTAAAAATACAAAGAAAAAATAGCCGGCGTGGTGGCAGGCACCTGTAGTCCCAGCTACTCAGA
AGGCTGAGGCAGGAGATGGCGTGAACCCAGGAGGCGGAGTTGCAGTGAGCCGAGATCGCACCACTGC
ACTCCAGCCTGGCGACAGAGCGAGACTCCATCTCAAAAAAATAAATTTACTTGTGCTCTCTCTT
TTACCTGTTTGTAAATTTATCAAAATAACTACTTTTGGCTTTGTTTCTTTTATTAACAATAAATGA
AATCTTTTTCATTGATTTCTTTTTCATTGATTTCTTATAATCTTAAACAACCTTTATAATTGATGTA
ACAATAACCTGTACACATTTAAAGTGTAAATTTTATTAACATTTTGATCCATGTATATAGCAGGAAATA
TCACCACAACAAGAGTGTGAACATATAATCTCTCCCAAGTTTCTTGTGCTTTTATAATCACTGCC
TCTTGCCCTGCCCACTCCCTCATCTTAAAGCAACCATTTGGTCTGTTTTCTGCCACTATAGATTAGATT
GTATTTTCTAGAGTTTTATACAAGTGAATCATGTAGTATAGTATTAACCATGTGTTTGTGTTGTT

M

FIG. 16B(13)

M

[illegible]

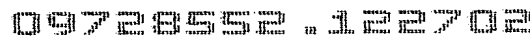
Z

FIG. 16B(14)

Z

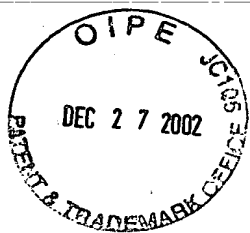
[illegible]

FIG. 16B(15)



AGTAGTCTAGTTTCATTCTCTATATAAATGTTGTCTATGCAAGTGAGCTGCTCTCCAGTGCCTTAGTTTC
ACTAATGTTGGGAAGGTCTCTTCTCTTGTGTTTGGACTTCTCTATCACATTGCTTCTCTCAAGAGAAGA
CATATAATGAAAGTGATATCTGGTGTCTAGGACTTCTTCAGAAGCTTGCCAGTTTTCAGAGCTGATT
TCTCTCACTGGCAACTCTTCAGAGTGCTGTTCCCTACTCCACCCTCCCCGGTGGTATGTATCAGTTTTTC
TACTCATCAGCACCCACTACTCCTGCCCTACTGTGTTTCTCAGATGTCTGCTGCCCTGGCTAGCTCATTTG
CTGCTTTTGTCACTCATAGAGCTGTCTTCTTCCCTTTTGTGGCTTCTGCTGACTTCCAGGGCAGCT
GCTCTGTCAATTGCCCTGTCTGCCATTCTGTCTTTTCCCCCTACCCCCACAGATACAACATCTACTCT
AATACCACACATTCTCCATGTTCAAACCTAACCTCATCACTTCCCCACACACATTCCCCAAAACCTGGTCA
TCTCCAGCTTATAGCATTCAGTTTCACTGAAGTTAGACATCTGGGCTTGTCTTACCTCCAAACATCTCA
TTAGCCTTCGATTCTACCCCTATAAATCCTCTTCTCAGTCTCCTTTAGATATTCTTGCCCTGCTGTGAG
ATCCATCTGGTTTATTGGCTAGATTACTTCAGAAAGCTTCAGTCAGTGACCTCTCTACTTCAAACCCC
ACCAGTTGATCCTTCACTCTGCCATCAGTCATTGCTTCTAAATCTAAATTGTTCCATTAAACCTTGCT
GTGATAAAACCTTTGGTAGTCTTTCAGTGTGTTCAGTGGTAAGTTAAAACTTTTCACTGTAATGTACAGG
CCCCCTTCATGATATGATCGCTGCCCTCTCGAGCCTCATGTGTGCTATTCCCCGCCCCACCTTTCCTC
ACCCACCCTAGTCTTTTCATGTCTGCCATTTTTCATTTACATTTAGCAGATATTTATTGAAGCCCCCTGTG
ATGTCTTACCTAGGTCTTTCTTGTGTCAGGACAGACAGGCTTTTTCAGGCTTCCAAGTTCACATCTCAG
TTTGAAAGACTATGTCTGACCTTGTCTTGGCCAATTACTCTTTATCTTCCAAGTTCATGATGTCTC
CACTGCACTCCAACAGAGTGAGAGAGCAAGACCTGTCTCAGTAAATAAAATAAAATAAAATAAA
TAAATAAATAAATAACAGCCATAAATTTATTTAATCATGTCTCTCTCCCCCATTTGATAGACGTTAAGG
GTATTTCCAGTATTCTTCTCTTGAAACAATGCTACATTGAATAACCTTGTACATGGGTCACTTTGAAA
GTATGGATATGTATCCGTGGAATAAGTTCCAGAAGTGAATTGTGTGAGAGGGGTGTGCATTTGTAA
TTCTGATGAATATTTATAGATTTATAGAGTACCTGTTTACTCAAACCTCTTGCCAAATGCAGCATTATC
AAAGTTTTTTATGTTGCCAGTGTGATAGATTTAAAAAATGGTATCTCAGCCAGGCGCAGTGGCTCAGCG
CTGTAATCCAGCACTTTGGAGGCTGAGGCGGCAGATCACGGGTGAGGAGATCGAGACCATCCTGG
CCAACACAGTGAAACCTGTCTCTACTAAAAATACAAAAATATCCAGGCGTGGTGGCGGCACCTGT
AGTCCCAGCTACTCGGAAGCTGAGGCAGGAGAATGGCATGAACCTGGGAGGGGAGCTTGCACTGAGC
CGAGATCGCGCCACAACATTGAGCCTGGCGACAGAGCGAGACTCCGTCTCAAATAATAAAAAA
GATGGTATCTCAGCATTGATTTCTTTGATCATCAGTGAGGTTGAGCATCTTTTCATAGATTTAAGAGAA
CTGTATGGTTTTTTGTGAGTTATGTTTCATATCGTTTACCCTTTTACTTTTAGGCTGGAAGCAGCTGT
TTTAGTGGAAATGGTGGAAACAAGACCCAGATTGCCATGGAGAGACAACTCTTTCTAGAGATTGGCTAT
GGAAGCAGAGTAGAGACAAATGATAGCTGAAGGATTTGATGTAGATGCAAGAAAATTTTTCATCTCTTTGA

FIG. 16B(16)



09740559 . 122702

206/223

P

AAACTTAATTGTGTTAAAAAAGTGGTATGAAAGGGAGGGGTTAAAGCTAGAGATGGTGGTAGAAAAAAT
GCAGGGTTCCTAAAGGACTGAGATTCCCTGGATGGAATTTACGGGAAGGGGAAAAATTTCTGGATATAGTG
ACTGGGAGTTAAGGGTGTCTAGTCCAATGGCTTTTATTTCTTGAAGGTTAGGCAAGGCCAACAGCC
ACATGTGTGGAGGAGATGGTTAGAGGGGAGAGAGGTTTGAAGGCACCCCTATGGAGAAATGGAGAGA
GCTAAGGAAAGACAGAAAAGACTGCAGAAAAGTCTTAGGGTCCACTGAAGCGGAAATAGTATTTGTAG
TGATACAAACCTTATGAGTTATTTGATTTTTTTTTTTTTTAAAGCAGCATCTGGCAGTCCAAAGTATAGG
GCTGACAGTTTGGGATTTTTCTTTCCATGTTGGTGTAAGAAAGAAACAGTGTAGTGAAGGAAGTTAGGA
CAAAAGAAATGATTGAACGTGACACCAAGTTTTCTTGATTTGGTAGAAAAGGAAATAAAGATAGAGCAGAG
ATATTGAAAAGAAATTAGAGAGGGGTTCAAGAGACTGAAGCCCTGGTGAGGTGAGGTGAGAGCAGGTGTGGT
AGACATAACAGAGAGAACTACAAGGATAGAAAAGTGTGGTTGGAGAGTGGGAAGGCAAGATTTATTCAGT
ATGGGGCTTTTCTGGGTGATGACAGCATCTGGAGTACAGCCATTGTCGTGAGTGGCCCAAGTGTAGCA
GAGATAAAGCGTTGTTGGAGTGAAGGAAGTCAAGGAACTGAGAGGCTGSCCTAGATGGGATTTTGGTT
GTCATCCATGAGGATATTGAAGTCAATCCAGGAGAAATAGCAGGCCCTGGGGACACAGGAAGAACTGAGCC
ACTTACAGTGTCTTCAGTGATAGGAAAGCACAGGGCAAAAAGCTTTCAAGAACAGGGACTGTTAAAGCCG
GGTACAGTGGCTCACACCTATAATCCTAGCATTTTGGAGGCCAAGGGCGGTGGATCACTTGAGGTGAG
GAGTTCAAGACCCAGCCCTGGCCAAACATGGTGAACCCCATCTCTACTAAAATAACAAAATAGCCAGGC
ATGTTGGCACGGCCCTGTAATCCAGCTACTTGGGAGGCTGAGGCAGGAGAATTTGCTTGAACCTAGGAG
GCGGAGGTGGCAGTGAGCCTAGATCGGCCCTTGGCTGCGATCCAGACTTCACTCCAGCCTGGGTGACA
GAGCAAGACTCTGTCTCAAAAAAAGAAAGAAATCAGACTCTTAATATTTGTAAAGAAAGTAGTCCCTTG
AGCTACTACTTAAGTCTAGAAAGAGTTGATATCTTGTGTTTAAAGTGTAGGGCACTTTGGGAGGCTG
AGGCAGGTGGATCACTTGAGCCCGAGGAGTCCAGACCCAGCCTGAGCAATATGGGAAACCTTGTCTCTA
CTAAAAATACAAAAAATTAACCAGGCATGTGGTACGTACCTGTAGTCCAGCCACTTGGGACGCTGAGGT
GGGAGGATCACCTGAGCCCGAGGAATGGAGTTGCAAGTGAAGCAAGATTGCGTGACTGTACTCTAGCCT
GGGCAACAGAGCAAGACTCTGTCTCAAAAAAAGAAAGGGGGGATATCATAGTGCCATTATTTAT
GAGTTTATGATGGCTTCTCTAAGCACCTTTTACATTCGGCATTTTATTCAGTACCTTAAAGCATCAAG
GAGTCCAGAAAAAATTTATATATAAATATAAATAAATATGTAATATAATATATATGATATGCTTCCCT
ATCTCAGGAAGGAAATATGTGAACATCAGGAACCGAAGTCTACTAGTTACATGCCATTGGATATATCA
CACAAAGTGTGAGGAACTCAGAGGCTCATTATATCTGGGAGTGGGAAGGAGGCACAGAGATGTGC
TTTGGGAAGTTTAAATTAATAAGCAATGGGGAATGAAGACACACAGAGGACAGCAAGCAAGA
GACATGAAAGAGTAAGTCATGTGTTGAGGATCTGGGATCCACTAGTTCTAGAGCGGCCGCCCGG
TAGCAGTTACGG

Q

FIG. 16B(17)

P

Q



09720552 142202

207/223

Q

Contig 4 (1241 bp)

TCGTGATCGGGTATTTCTCTTACGCATCTGTGGGTATTTACACCGCATAGATCCGTCGAGTTCAA
GAGAAAAAAGAAAAAGCAAAAAAGAAAAAGGAAAGCGGCCCTCGTTCAGAAATGACACGTATAGAAT
GATGCATTACCTTGTTCATCTTACGTATCATATACTGTTCTGTATACATACTTACTGACATTATAGGTATAC
ATATATACACATGTATATATATCGTATGCTGCAGCTTTAAATAATCGGTGTCACTACATAAAGAACACCT
TTGGTGGAGGGAACATCGTTGGTACCATTGGGGGAGGTGGCTTCTCTTATGGCAACCGCAAGAGCCCTTG
AAGCACTCTCACTACGGTGATGATCATTTCTTGCCTCGCAGACAATCAACGTGGAGGTAATTTCTGCTA
GCCTCTGCAAGCTTTCAGAAAAATGCGGATCATCTCGAAGAGAGATCTCCTACTTTCTCCCTTTGCG
AAACCAAGTTCGACAACTGCGTACGGCTGTTGAAAGATCTACACCGCTCTGGAAGTGCCTCATCC
AAAGGGCAAAATCCTGATCCAAACCTTTTACTCCACGACGGCCCTTAGGGCTCTTTAAAGCTTGA
CCGAGAGCAATCCCGAGTCTTACGTGGTGATGCTGCTATGTAGTCACTCACTCAACG
ATTAGCGACCAAGCGGAATGCTTGGCCAGAGCATGTATCATATGTCAGAAACCTATACCTGTGTGG
ACGTTAATCACTTGGGATTTGTGGCTGTTCTGCTACTGCTTCTGCTCTTTCTGGGAAGATCGAG
TGCTCTATCGGTAGGGACCACTTTAAAGAGATCGCAATCTGAATCTTGGTTTCATTTGTAATACGC
TTTACIAGGGCTTTCTGCTGTCTATCTTTGCTTCTGCTTCTGCTGCTCTCTTTTAGTATATTC
TTCGAAGAAATCACATTACTTTATATAATGTATAATTCATTATGTGATAATGCCAATCGCTAAGAAAAA
AAAAGAGTCATCCGTAGGTGAAAAAATAAATAATGAAATCATACCGAGGCATAAAAAATATAGAGT
GTACTAGAGGAGGCCAAGAGTAATAGAAAAAAGAAATTTGGGGAAGGACTGTGTTATGACTTCCCTGA
CTAATGCCGTGTTCAACGATACCTGGCAGTGACTCTAGCGCTCACCAAGCTCTTAAACGGGAATT

Q

R

Contig 5 (1701 bp)

ATAAAAAACAGTTAATTAGGAGTATCTAGGTATGTGAAGCATTCATCACCCYCCCTAYTGRCAAAAWT
WTCGWTAGGCAAAATTTATATTTAAAGTAACTTTAAACATGAACACTTCTTAAACTTTGGCTCATAATTT
CACAAAAATTAGGCTGCAAGTCACCATATTCATCAGATACTGGCAGACACTAACTTCTGGCGCTATGAC
ACCAAGCAATACTGAAATCTCTTATCTTTCCAGGGGGTGTTCATGTATTCAGTGTTCGCAAGAGTT
CCTGCTGAGCTAAACACAGTCCACTGTGCACTCTACGAAAGAGTCCATGAGACAAGCATGGGGGAGGGT
AGGAAGTTTAACTTTACAAATGCCGTGGAGACGCTGGCAGTGATGAAAGCCTAGAAAACTCATGAA
AGGACCTTTTATGAGCAGGGTGAATGTAGAGCACAAAAAGCAAGTCAGATGACCCACTTAAAGCTTTGC
CTTTACTGATGAGAAATTCATTCTCATTCAGATTAGTCTCTCTAGAAAAAGCAACCTTATATAAGA
GTTGGAAAAATTAAGATACAGGAAGTATAATTTCTACTAAATTCAGTTTTCTCTCAAAATATCAGCCT
AAGTCCTAAGGTCTGTGGCCCAAGACAGAAAAATACAAGGCGCTGAGAAAAATATGCTATTATCTTGGTGT

R

FIG. 16B(18)



097R055R . 12R70R

208/223

R

AACAATCTGACTGTGGGGTTGAGGAAATTTAAGCTCTACAATCCATAGATCAGACCAGAAAGTTTA
GGGTAGTAATATATGAGAGGAAATAGTTTCTTCTGGAACTTATATAAGCAAATAAATGGTAAACCT
GATTTGCAAGGTAATGACAGTCCAAAGTTCCCTCAAAGCAGAGAAACCACTTATTTGCTCATTCATCAAC
TAAGTTCCTTGTGTGCCAGGCTGGAGAGAGAAAGCAGCTCCTGTCTCAAGGAGCTCACATCTCAG
GCATCTCTCACCCCTCTTCTCATGTTAAACCAAAACATTTCAAGTTTCATCAATGAAACTCTTCATCCA
GGAGGCAGATAAAATGGCTTCTCTTCAATTTTGATTCATTTACTCTTTCTTTTATTTTATTTATTTAT
TATTTTTTTTTTCTGAGAAGGAGTCTCGCTCTGTTGCCAGGCTGGAGTGCAGTGGCGTGATCTCGG
CTCACTGCAACCTCTGCCCTCCCGGTTCAAGCGATTCTCTGCCCTCAGCCTCCCAAGTAGCTGGGATTA
CAGGCATGGCCACCCACCGCCGGCTAATTTTGTAAATTTTAGTAGAGATGGGGTTTCACCATGTTGGTC
AGGCTGGTGTCAAACTCCTGACCTGTGATCCGCTGCCCTCAGCCTCCCAAAGTGTGGGATTACAGGT
GTGAGCCACCATGCCCGGCTACTCTTTCTTTAAACAGAGAAATAAGATGGAATATTTTATCCCATC
TTTTCTTCTGTAATTAATAAGGAATACGAAGAACTTGACATAGTCTCTCTCCTCATGTGCTCTCTTA
CTTCCCATCCCAATTCATGTTTGTCTCTCTTTTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT
AGGTAAGTACTAGTCCAAACTACAGAGCTACACCTGGAGCCTAGATTCACTGGTAGCAAAATCACTAATTTT
CTGAAGGTAAATGGGAGAAATGGGGTGGGGGAACTCATTA

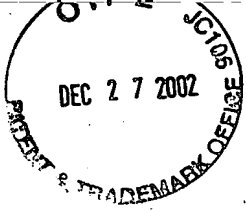
Contig 6 (1293 bp)

GGAGATAATAAGTATACACTATGTGTGAAGGGGTGTCTCTATTGTTGTGGCGATTAGGTGAGTAA
TTTTACACCTGGTTGTGAATAAAGTCCGAGATTGGGGACTCACGCTTTGTAGAGTCTCCAGGACAAT
GGGTTTTGCCCCCGTCCCAATTAATAGTTAAAGTTGGGGCTTTTCGATTCCCTTATTCCTCAACTGGA
TAGGGCTCTTGAATGCCCCCAAAAGGTTGACCCCTTTCCCAACACGTCAAAGAGGAAATCTCCCCG
TAGACTACCTTGAACTGAAAGTGCAGTCCCTACAGGGTATCTAGCTTGTAGCATCCCCCACTGTGA
ATCAATCCCTTAAATAAACCTATATAAGATGTATGTAATAGAGGACTAATCTTAAATATAATAAGCAT
ATATTTAATAATTTTCGGTACTACCCCTTATCTGGGGGGGGTGGGGGATATGTTCCAAAGACTCC
CAGTAGATGCCCTGAAACCCACAGATGGTACTGAACCCCTACGTAAACTGTATTTCAATTCCTATACATGCAG
GCTATGTTGTAACTCTGTAGGGTAACCACTAAAGAACAGGGTCTATAACTTGGCAAGAGGGGAAAAA
GCTAGGATAGTAAAAAGTCTATCAATCCAAAAAGCAAGAAAAAGAGAAAAAGAACATGCTGGCATA
TTATTATAAGTATTGTATTTTATTATTAGTTATTGTAAATTTTACTGTGCCTAATTTATATAAATTAA
CTTTATCACAGCTATGTATGATAGGAAAAATATATCTGTGGTTTTAGGCATCCACTGGGGTCTTGG
AATATAATGCTTCCCCCAGATAAGAAGGTACTACTGTAATATATATATATATGTCATATTAAGTATACAT
AATTCTACTAGGTAGCCACATTATATATTAATTATATTAATATATATATCATATAGAAATTATTTTAA

S

FIG. 16B(19)

S



09720552.122702

209/223

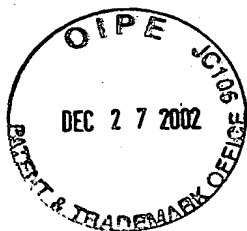
S

GGAATTGACTCATAATAGAAGAGGCTGGCAGGCTGGAGATTTCAGGGAGGAGTTGCATTTCAAGTGCAAAA
GGCAGACTGCCAGAGAAATCCCTCTTGGTGGGGGAGGTGAGCCCTTTTGTCTTATTCAAATCTTTGAGG
AAAATAGAAAGCAAGAAATATATACTATATTAACAACAATAATGTTCCAAATTAATAACAATAAT
ATAAAGCCTAATAATAAAGCCCTCAATATATATGCTGTTTAAAGAGAGACATTTTAAAGCTTAAAGGATAT
AGAAAAGTTGAACATACAAGCATGGAATAAATAAGCATGCAAAATACTAG

Contig 7 (3140 bp)

CTCGGAGTCCACCGGGTGGCGCCGCTCTAGAACTAGTGGATCCCCCGAAAAATAAAGAATGGAATAA
AATAAGCCATGAATAACTAGTATATACTGATGTCAAAATCTGACAAAGCACACAAAAAGAAAAATAA
CTTTAACTGCAAAATCTTAAATCCTAGCAAGAAAAAGCAGCATATGTTATAATTATACCAACCTG
ATCAAGTAAGGCTTACTTCAAAAATTTAACCATGGTCCATTATTGGAAAAACATATTATAAAAAATCCTC
ACAAAAATAATTCAAAAATATAAAGCCATATGATAAGCCTGATGAATGCTGGTTACAGAACTGGTTT
TCTTTAAAAAGGCAATCATTTGGGAATAAACCCGCTTACTCAGTATTTACTATGTGCTAGGCCCTGTTC
CTTCTACTAGAAATAGTGAACAAATTTCAACAGAATCCCTATCTTCATGAAGCTTACAGTCTAGTAGCA
GAAACTGACATTAAACAAATCACCTCACAGACAAATAGGAGAAAGTATGGAAGAAAGAAATATAGGAC
TCTAAGAGCCTATAGAAGAAAGAAATTTGACCTAGTCAGGGAGCTCAGCCAAAGGCTCCCTAAGGCACT
GATTCCTGAGCTGACAAAGTAGAAGATGAACAGGAATCAGGGAGGCAATTAAGGAGGCGCAGGAACTCCAT
GCCAGTCCGTAACCTCAGAAAGGCGAGGAGGCTGTAAGAAAGCCACCCGTGTCTGAAGTATAAAGA
GTAAAGGGGAGCAGGTGCCAGGAAGCTGGAGATGTATACAGGGTAGGGCCACACAAGGGTGATTTTCT
TTGTCCCATAAAGCATTAAGAAGCCTTTGAAGAACAGAAAGCATGACAGTGACCTCCCTGCCCTGCATTTT
GGAATGAACACTTCAATTAGCTGGGTGTAGAGAAATATAGCACTGGATGTGGACAGTCCAGTTAGAAAGTT
ACTGGTGGAGACACAAAGTGTACAAGGAAGGAGATATTCAGGAAGTAAACTGCACAGGGGTGTGATAA
TAGATTGTCTCTTGGGTGACAGGGAGTGCTGAATGCTACTCTCTTTGGTTTCTGATTTACCTAACAG
ATGCCATCCAGTAAGTCAGATAACAGAGGAAAGAGACAAAGGCGTAGTGGCTCATGCCGTGAATCCCAG
CACTTTGGGAGGCCGAGGAGGTGGATCATTTGAGGTGAGGAGTTGAGACCAAGCCTGGCCCCCTCTGCT
GGTCTTGATTGAAGTCATTCATGCAACTGTAATCATCTAATGGTTTCATCTGGGACTGAGATTGTCTCAA
GCACATGCTGGCAGTTGGTGCACCTTGTGATTGGCCCTCTCTCTTAACGTAAAGGAAGTGAGCCAAAG
CTTCTCACATTATGACAGCAGTGTCCCATAGAGCCAAATGACAGCTGTAAAGTTCTCTTGAGGTATCAA
CTTGGAAAGACACACCATTAATCTGCAATTTTATGGTTTAAAGCAAGTCACAGGGCCAACTCAAAATTA
GGAATGGAGAAATAAATCACTGTTGATAGGAGTGGCAGTGTCTCACTGTAAAGGCAATGTGTACAA
GGATGGGATTTTACGTAGCCATCTTTGCAAAACAGTCTACCACAGTGTCTTTTTCCTTTTCGAGTGCTTA

FIG. 16B(20)



09728552.122702

210/223

T

AAAAATTGTTTTAAATAATTATTGGTTTTTCAGAAATTTCACTATTGTGTATCTAGACACAGATTTTC
CTTTTATTATCTGTTTGGGGGTGTTTAGGGCTTCTTGGATCTGTGGTTTGATGTTTTTTCCTCAGTT
TTGGAGAATTTTCAGCCTTCGTCTGTTCTTCGAATATTCTCTGTGTCATTTCTCCCTTTCCGCTTTT
CTGAAACTGAAATACATGTAGGTAGATCATTTCAATGTATCCTTTATACCTCTTACCTTCTCTTTGG
TATTTTTTATAAATCTTTTGTCTCTCTGCTTCAATCTAGATACTTCCCTTTGACCTATTTACCAG
CTCACTAATTTCTCTTTCAGGTATATTTTACCTGTTCTTAAATTTATCCATTAAGATCTTTTTTTCAGA
TCTGCTATTACATTTTTTATACCATTTCTTGACTAAAATCTTAAATGCTACAGGACTGTTCTTCTGTCTG
TTTCTTACTGATTCTCATGTTGCTTTTTTATGGACTAGACACTGTAGTTTTTAAATTTATTTATAGAAAT
GACCTGAGACCTATGATATATTTTCAAGAGAGGATTTACGTTTGTCTTCTAGCTTTGCCCTAGGAGTCTT
CAATCATTTTAAATTCAGTTTCAGGGACTGATTGCTTTTAAAGCAGGGCTGTAGTCCCTACAGGGGTGGT
CAACTTCATTTCACTACCTAATATACCTATTATGTGTGAGTACTTTGCTAGATGTTGGTAGGTCCTTG
TGAGCAGAGCAGACCTCTCTTGTGCTGTATGGAGCACGGAGCTTGATTATATAATTTGGCAGGTGTGTG
TGTGTGTGTGTGTGTGTAAATAAATAATTTATTTATTTATTTATTTATAGCCCGGTACAGTG
GCTTACACCTGTAATCCCAGCACTTTATGAAGTCAAGGCAAGTGGATCACTTGAGGTGAGGATTTGAG
GCCAGCCTTGCCAAACATGGTGAACCCCTGTCTCTTCTGAAATAACAAAATTAGCCAGACGTGTGGCA
GGTGCCTGTAATCCAGCTACTCGAGAGGCTGCGGCATGACAGTCACTCAAGCCCGGAGGTAGAGGTT
GCAGTGAGCTGAGATTGTGCCACTGTAATCCAGCCTGGGTGACAGAGTGAGACTCCATCTCAATATATA
TATGCGTGTGTATATATATATCTATATCTTAAAGATAGATATATTTATATAGCTAAGTAATTAAT
AAATATATTAAAGTTCTATGAAAGCAATGAGTAGGCTGCTATGTTGTGAATATTTGGACTACACAGGG
ATAAGAATGGGTCTACCATAATTAGCAGGGACAGGTTTGTGTTAAGCCAAAACCTAAGAGGGCTTAGAA
CAGAAACCCGCGCAGGAGCAGTTACCAGTGTGAAGACTAGATGACAACCAAGGGGGATCCACTAGT
TCTAGAGCGCGCCGCCAGCGGAGTGGCAG

Contig 8 (18073 bp)

AGCGGTGCGCGCTCTAGAACTAGTGGATCCCCGAGGAGTGAGGAGGACCTCAACCCCTACTTCTGA
AATGGAGCTCTGAGATGTTGGAGTAGAAATTTGGAAACCAGAGAGAGAGAGTAAGGGTAGTGTGTGCA
ACATGCATTGTATATGGGGGTGCGGAAAGTCAAGGAGTTTGCCTCAAAGTCTTTCTCGGAGACGGATG
AGGTTTTCAGTGTGATTTTCTGCTGCTGCTATGGATATAGTACCTGTTAGTGACATGGATCTTCTT
AACTTCTGATGTGTCTTTCTCCCTAGTGACGCATACCAATTTCTCCACAGCTTCCATCACCATGC
ATTGTTCTTTTCCCTTGTCTGTATTACCTTTCTGGAAGGAATTTTATTTAGGCTAATTGTTAC
TCCCACCAGTATTTAACCACTGGATATTTTCATATGATTGATCTCTTCTGATTTTGGAAAAATAAAATGTA

FIG. 16B(21)



09720552 . PARVOR

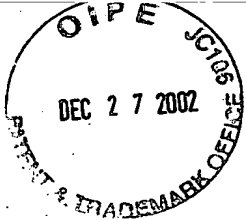
211/223

U

ATCTCATATATATTCATTGATTAGTGGGACAGTCAACACTTCTTTGTGTATTTTCTTAGCTGTTCTCGT
TTTCTCGTCTGTAAATATCTGTTTAGGTCCTTCAGATTTTCAAAATTTGGACTGTTATGTTTTCAGTA
TTGTTATGAGTCTTGTTCATTTATGACAGTTCATTTCTTTTAAATAGACTTTTCTTTTTC
TTAGAGAAATAAGAAAAATAAATAAGACTTTGTGTTTATAGAGAGTTTCAGGTTTCACAGCAA
AATTGATCAAAAGTATGGAGAGTTCCGGCCAGCGGTGCTCACACCTGTAATCCAGCACTTTGG
AAGCCAAAGGTGGCAGATCACAAAGGTACAGGAGTTAAGACCAGCCTGGCCAATATGATGAACCCCAT
GTCTACTAAACAATACACAAATTAGCTGGGTGTTGGTGACACACCTGTAACTGTACCTACTCAGGAGGC
TGAGGCAGAAGAATCTCTTGAACCTGGGAGGTGAGGTTACAGTGAGCCACAGTCATGCCCCCTGCACCTC
CAGCCTGGGCAACAGAGTGAGACTCCGTCTTAAATAAAGAAAGAAATAATAGAGCATTCCTAAAT
ACCACCTGTCCCCAACACCTGCACAGCCTCCTCATATCCACATCCTACACCTGTGGTACCTTTGTT
GCAATTGATGGACCAACATTGACTCCTCATATACCCCAAGCTTTGGTGTGTACATTTCTGTAGATTG
GACAAATGTATAATGACATGTGTCTACCATTTGTAGTATCATACAGAAGAAATTTGACTGCCCTGACAGTC
CTCTGCTCCACCTGCTTACTCCTCTCTCCCTTTTCCCTAACTGCACAACCACTGATTTTCTTTTCTTT
TTTGAGAGGGGCTCACTCTGTCCCCCAGGCGGAGTGAGTGGGGCCATTTGGGGTCACTGAAAGCT
CCACCTCCGGGGTTAATGCAATTTCTCCGGCTCAGCTCCCGGTAACCTGGGATTAAGGGCCCCGCCA
CCAAATCGGGTAATTTTGGAAATTTGAAGTAAAGGGGTTTCCCCCATTTAGCCAGGATGGTCTCG
ATCTCCTGACCTCGTGATCCGCCACCTCGGCTCCCAAGCTGGGATACAGGCATGAGCCACCACGC
CCTACCTTTTAAAAAACAAGGTCTGTCTGTACCCAGGCTGAGTGAGTCACTCCT
CACTGAAGCGTCCACCTCCAGGCTCAAGTGATCCTCCACCTCAGCCTCCTAAATAGCTGAGACTACA
CACACACACCACCATGCCAGCTAAGTTTGTATTTTATAGAAATGTGGTCTTGTGTGTGTCTCCAG
GCTGCTTGAACCTCCTGAGTTCAAGCAATTTGCCCTGCCCTTGGCTCTCAAGGTGTTGGGATTACAGGC
ATGAGTCACCGCACCTGGCCTTTTCTTTTCTTTTAAACCAGTGATCTTTTACTGTCTCC
ATGGTTTTTACATTTGGCTTCTGTCACTTAGTAATATATGTTTAAAGTTTCTTCTACGATTTTCTATGTT
TTTAGCTTATTTCTTTTAGCAGTGAGTAATATTTTCAATTGTCTGGATGTGCCATCACTTATTTATCCAT
TCGCCGTGCTGAAGGATATCTTGATTGCTCCAGTCGTGGCAATTATAAATAAAGTTGCTGTAACATCC
ATGTGCAGGTTTTTTTAAAGTGGCATAAGTTTTCATCTCATTTGGTTAAATAACCAAGGAGCACAATTGC
TGGATCATATGTTAAGAGCTTATTTATTTTGTGAGAGACTACCAAGCTGCCCTCCAAAGTGGATGTAC
CATTTTGCATTTCCACCAGCAGTGAATGAGAGTTCTGCTGCTCCATATTTTACAAACATGTAGTATT
GTCAAAATGTTTGGATTTTAAACCAAAATCCATTTTTCATAGATGTGTAGTGGTATCCCGTTTAAATTT
GCAATTACCTAATGACTTGATGTTCTGTGCTTTTTCAGATGCTTATTTGCCGACTGTTTATCTTCTTT
GGTGAGGTGCTATTTCAGGCTTTTGGCCATTTTAAATCTGGTGTATTATTTTCTTGTGAGTTTAAAGA

V

FIG. 16B(22)



00720552 . 122702

212/223

V

ATTCTCTCCTTTGTGAGATCTATCTTTTGCAAAATATTTTCTCCTAGTCTGTGGCTTATCCTCTGATT
CTCTTGGCATTTGTCTTTCACAGAGTAGACATTTTATATTTTAAATGAAGTCCAGACTATCAATTATGTTT
TCATGGATCATGCCCTTGTATGTTATATCTAAAAAGTTCTCGCCATACCCAAAGTCATCTAGATTTTCTC
CTGTTATCTTCTTGGCATTTTATAGTCTTATGATTGATATTTAGGTCTATGATTCATTTTAGTTAAAT
TTTTGTGAAAGATAAAGGTCTGATATGGATTAATTTTCTATATGTAGCTGTCCCGTTCCAGTATCA
TTTGTGAAAGACTATCTTGTCCCATTTTATTTGCCCTTGTCTCCTTTGTGAGTTGACTATATTTATGTG
GGTCTGTTTATGATCTCTGTTCCGTTCCATTTGATCTGTTTGCCCTTTCTTTTGCTAAATACCCAGTCTT
AATTACCATAGCTTTAAAGTAAGTCTTGAAGTCCAATAGCATTAATCTTTGACTCTTTCTTTAATATTGA
GTTGCCCCCTTCAGAACTTTAATGTCTCTCCATGTAACTTTAGAAATCAGCATTTTATATTCACAAAAT
AACTTGCTGAGATTATGATTGAGATTGCATTTGAATCTATAGGCTTATTTGGGAATAACTGACATCTTGA
CAATATTGAGTCTTCCGTGCCATAAACATTAATTTATGATGGCTTCTTCTTTATGTTTAGGAGCTTTTG
TTTTTTCTGTGAGATATCCACTTCTACCTTTATGATTTCTTAATTGCCCTTTTATGCTTAGAAAAGTTT
TCCTCATCTGAGCTCACATATTCATTTATTTCTTTTAAATGTGTTTCAAGCATTTTAAATTTTAA
CCTATGTGGAAATTTATTTTGGTATATGGAATGAGGTGGTGAACCTCCTCCTCAAAATATGTAGT
TATTTTCCCAAAACCATTTTCTATTAATTTATCAAGAATAGACATGTATACATATACATATAAATAG
TCAGCCTTCCACTTGTGTTTGACCTTGTGAAGGAAATTTGATGAGTTTCCAAATTTTGGATTAGGCTC
AGGTAGTAATTGAGCTGGGTTCTGCCAGAGATCCATGTTAATTCACATCCAAACAGAGTTATAAAATG
TAAGTTTATGAAAATCTAACAGTATATCACTGGTTTAAATGATCACAGCTAGGAAGAATGGGGAAT
GTCAAAATCTTCTGTGGATGCACCTGAAGGCCACTGCTGAACCCCATTTCCCTGCTAGGCACGGCTGCTG
GTACCAAGGGCAAACTCCTGGAGTATATGAACCACTACATCTCCTTCTCTTCCCCCTTACCCCTTG
AGATTTTCATGTGTCCCTTAAGGATGTGTCTTCTTCTTCCCTTGGAGAGTCACTACCACATTTGAACACT
TTAGACTGTGAGTCTGTGAAGATGGGCTCATGAGTGTATTGCTCCCAAGTTGTTTCTCTAGCACTAG
CTCAGTATAGGGCATAAAAAATCTGAATGGATGAACAAACCACTATTAAGTGGGACATGCTACTATC
TTACATGGTTCGAGGTGGAATAAAGGTTGAGAACAGCTATATAATGTGTTCCCTTGAAGGGCAGCAGTAC
ATCAGTGCAATCAGCCTACCTTCTCCATACCTTCTCACTCTGAAAACTGTAAAGCTGCACCTAGCAATCA
ACTTGGGAGCTTTAAAGGGACTGCTCCCTAGCTCTCAACCAAAAGCTGTAGTCTAGCACAGGTGACT
TTTTTAAAAAAGTTTTTGTCCAGATGTGATGACTCACGCCCTGTAATCCAGCACTTCGGGAGGCTGA
GGCTGGGAGGTACCTGGGTCAGGAGTTTGAACCCAGCGTGACCAACATGGAGAAACCCCATCTCTAC
TAAAAATTTGCCGGGATGTTGGCACATGCCCTTAATCTCAGCTACTCGGGAGGCTGAGGCAGGAGAAT
TGCTTGAACCCGGGAGGCGAGGTTGCCGTGAGCCAAAGATCACACCATTTGCACTCCAGCCCCGGCGACA
GTGCAAGACTCCGTCTCAAAAAAATAAAAAAGGAGTCCCTATTAAAGACTTATTTTACAGGTTGGATA

W

FIG. 16B(23)

W

TCTCTAATCCCAAAATCTGAAATGCTCCAAAATTTGAAACTTTTGGAGCGCAGACATGATGCTCAAAAA
AATGCTCACTGGGACATTTTGGATTTCAAAATTTGGATTAGGACTAGGTGTGGAGCTCACACCTGTA
ATCATAGCACTTTGGGAAGTTGAAGCAAGAGGATCAGTTGAACCCAGAGTTTGAGAGCAGCCTAGACA
ACATAGTGAGACGCCGTCTCTACAGAAAAATTTAAAAAATTAGCCAGGCATCGTAGTACATGCCTATAGT
CCAGCTACTCAGGAGGCTGAGACAGAAGGATCACTTGAGTCCAGGAGGTAGAGGCTGCCTGAGCTAT
GATCATAACCACTGTCTCCATCCTGGGCAACAGAGCAAGACCTATCTCTTAAAAAAAATCTGAAACAC
TGCTAGTCCTCAAGATAAGGGATAGTCAGTCTTTATAAAGACTCAATTAGTTATTGGATATCTGAGGAA
GCATGCATATCAGGCTCCCAAAAGATCATTTGGTTTAGGCACACATTTTAATAGCTTGAAATCCAGAAT
ACTCTTCTGGTGACCAGCTCAGACATAGTCTTGATAATATAGGACCTCATCTAACATGACTCCCTATTT
TCCAGATAAGCATGGATTCTGTGTTTCACTTCTGTTCTGCTCGGCAGTGGTCTGATATGTGTGAGTGCCA
ACAATGCTACCACAGGTAATTTGTCATTTGATAAGGCTGCTATTTGAAATGAAATTTTGCTTTACATTT
TAATGAGCCACATTTGAAAACCGAGATGGTATTTGAAGAAAGGAATATAAAAATTTTATTCAAAGTGAT
GGTAAAAATAGGTGCTTCAGAAATCTTGGAAATGAATGCTCAGCATTTGTTTTTCATACATACATAACTG
CTTTAAATAAATCAAGAGATTATGTGTTCTTTCTTGAAGTAATAAATAAATTTGTGACATTTACAACCT
CTATATATGTTTTCTGAGGAATAAGTGAAGAACTTTGTGTTCTTCTCCCTTAAACCGTAGTCTCTTGG
AGGAGTAGGAAGGTCCAGCATGAGATAAAACGTAGGGGTGGTGGTGGAGGGGATTGGTCTT
TGCTTGGTCTCCATATGTTTGAGAGTTTATTAAGGCTTGCTGCTTTGTGCTCACAGCTTTTGTAGCCTC
ACATTTCTCATGTGCTATTTCTTGTGTTTTTGGTGTGTTGTAGTTGCACCTTCTGTAGGAATTACAAGAT
TAATTAACATCAACGGCAGAACCGATTAAAGAAAGAGGCCAAACCTTCAAATCCAACTTCTTCACTAA
CTTCTCTTTCTGTGGCACCAACATTCAGCCCAAATATAACTCTGGACCCACCTATTTAACCACTGTCA
ATTTCTCAGACTCTGACAAATGGGACCACAGAACAGCAAGCACAATCTATAGGCATTACAATTTCCAC
CAATGGAACGTGGCTTCCAGATAACCGATTACCGGATGCCAGAACAGAACCCCTGGGAGGGGAATTCCA
GCACCGCAGCAACCACTCCAGAAAACCTTCCCTCCTTCAGGTACTAGAGATGATTTCTGTTTCTTTTG
CTCTTTGAGTTAGTCTTCTCTTTTATTATCTTGTGTTGTTTCTAGCCTTAAATTTCTTCAAATAAG
TAAAAATTGCTCAAGTGAAGTAATGAAACCTGTATGTGGAATTTTTGGGTTAGCATGAGTGAAGAGGAAA
GAAGAAAGATTCTGGAGAAATCTTTCTGCTAGGTGGGATCCTGGTTAGATTGAGAGGACTTAAATGTG
TTTAAAGGTAGAGAAGAGGCTTAAAAAGACAAGAGAAATAGAGGAGCTCATTGACGATGCAAGAGACT
GAAGATGAAAAGATACAGAGAATGAGTAATAAGATTAGGTTTGGAAAGGGAGGGATCCGTGGAGACCAT
GGAAGGAGAAATGGGTATTGATGTCCATGACAGTTAGATGTGAGATACAGAGAAATGAGTAATAAGATT
GGTTTGGAAAGGGAGGGATCCATGGAGACCATGGAAGGAGAAATGGACATTTGATGTCATGACAGTTAG
ATATGGAGTGGCAGGCCAGTGGCCAGGGGTGGCATCAGGCTCTGGGAAATGGTTACATTTGCAGTGCCAG

X

FIG. 16B(24)

X



09720552 . 16B(25)

214/223

X

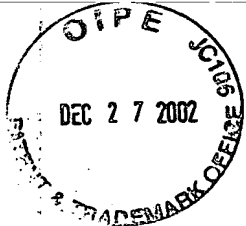
X

TTGTT CAGGG CCTCAGGTTGAAGCAGTAGTCCCAAGGAGAAAATCAGAGACGTGGATCTGAGACCAAGG
CAGGTAAGACAAAGTTTCTGACCTCTTTGAACCTTAGGTACCTTGTCTGTAAAGAGGATTAGAGATACC
CTCAAGGGCTTCTATGAGGAGTAAGGAAATAATCATTACCTGATTGCTATGTAAGTGTCTATCCCTTT
TCTAGCAAAAATCAGTCTTTCTCTCTTCTGTTCCAGTTAGATGGTGGTGGCCCTAAAGCAGAAATCAC
ATCTCGCTCATGTGGAACATTCAGGAACCTGTTTGGCTCAGTTGATTCTCAATTTGTTACTACAGATGATAT
CTTTTACTGCGCTTATAACTCAGACCCCTTCACCTGCCAGCTTTTCCCCATATTTTCTACCGTAAAGAC
AAGACAGCATTTGCAGTTAAGAGCACAGTCTTTCAGTGCCACACTGAGTTTGAATCCAGCTCTTCCATA
AACCAGCCATGTTTATGGCATAGCTGGCTTACTTTATCTCTCTACCTCGGTTTGTTCATCTGTGAAACA
AGAATGAGTGATAGTAATAGTTCTTACCTCATAGAGGAGATATTAGGATTAAACAAGTTAATATGGGTA
AAGCACTTATAAAGGTGCCTACACATGGTAAGCACTATTTTAAAGTGTGAGCTGTTAGTATTTGTTGTGG
TTATTGCTCTGATAGTTACCAGTAAATATATGAAGTACCTTTAATGCAGATGGCATCCCACTATTCT
TGATGAGATAGGGACTGCAGACAAATAATGTCTGATACCTTGTCTTTGCTTTAGAGTTAATGTAGTTT
TGTCATAGTTATTACTGTGTGCTAGGCATCGTACTAAGAGTTTCTAGAAATAATCCTATGAATTAAGTT
CTATTTTATGTTTATAGGTGAAAGTATTTTACAATGATGAACCAATAATTTGTGGAATGTTTTTCAGT
GTACAGGTCATGACACAATTCTATGAAATCAGTTTAGCAGGCCACCACTAGTTGTTGTTTGTGTTTATTT
TTAATGGATGATCCAGTTCATGTTTATCTTTTAAATGTTACATAACAATTTTTTGAAATTTTAGTAACA
ACATAAAAATGTTGGTTGTGGCCATTGCTTAGGGAGAAAGGCAGGATAAAGTTGTACAAACTGTATGAGT
GAATGGAAAAGGTGGAGACTGTAACACAGGCCCTGACTGACTGAACAGCCCATGTTCTATTGTGACTGT
CTTTTCAATTAACAGTTCTGTGACATGACCATGGATAATCATCTCCTTTTAAACAGATGCTTGATTTTCA
CTGTATATAGAGGTTAAATGATTTGTTTATAGATCTCAAGGCTGACAAATTAGGCCATTTTCTCACCTTT
GCGGCTTTTCCACTCTGCTTAGGGAACCTAGTTTTCATAAACTGACTTAGGTCCAAATGTGCCAC
AGCTAAGAATCTAGTTATTGTACATTTAACACAGTTTACGTCATAGGAGGCTGAGACTATGTTTCTCTA
GTGGCGTTTATTCAAGATGAGTAAACACAAGAAACCAATATCGCACATGGGAATTTTCATAGTCTTAA
CCCCACATCCCACTTATCACCACTTACCAGTCTCCTGTAACAGTTACAATTTTTTATTAATCAG
TATTTGATGTATATTGTAATTATGAATATTTTATGCTGAGCTATAAGTATAAATGGATGTTT
CTTTGACAGTTTTTTTCTGGATTAAATACTTACCTTATTTTTTGTGTTTATTTAGTTTCTATTAGTCA
GGCCAGGCACACTGGCTAACACCTGTAATCCAGCACTTTGGGAGGCCAAGGTGGACAGATCACTTGAG
CTCAAGAGTTTGAGACCAGCCTGGGGAACATGGTGAACCCCATCTCTACAAAAAATACAAAAATTAGC
TGGGCATGGGTGCATGTGCTTAGTCCCAGCTACTCAGGAGCCTGAGGTGGGAGGATTGCTTAAGCCC
AGGAGGTTGAGGCTGCAGTGAGCTGTGTTTATACACTGCACTCCAGCCTGGGTGACAAAGCGAGACCA
TGCTCTCAAAAAGTTATTGCTACTCAATTTTACCATGCTCTCCAGAGCCTCTCAAAACAGCTTTCTAC

Y

Y

FIG. 16B(25)



09720552 . 102702

215/223

Y

AAAGTGAGATCTGTTAGATAATCTATTCTTTTACCTCTAGAAATTCCTCCTGAGCCCTCCATTGTC
TTATTCAGTCTAGGCTTGTCGATCTCTAGGGCTACTACAGATAACATCAGCCTGAGATTTCCCTTCT
CTGTCAATCTGGGAATTCCTCTGCTGCTTCTGCTGCTTCCATATGCTTCCCTTTTGTCTTCTCA
TCATTCGGTAGATTCCTGAGAAAAGGGTCCATGGGAGGCAATTCATCCTTACATATCTAAAAATAT
CTTTAGGGCTGTGCATAGAAATTTGAGGAATATTTTCCCCCAGAAATTTTAAAGTAATGCCCTAACTGA
CACCTGTTTACCAGGTTTGGAGGATTTTACTGCTATCTTAATCCCTAAATGTTGTTGATGCTTTCTAGGA
TCTTCTCTTTATCATCAGTATCCTGAAATTTACAGAGATGATCTTGATGTGGTCTTTTTCGTTTCAT
TATTATGGATACTTAATAGGCCCTTTAGAGCCTTGATCTTGCAATTTCTGAAAATTTTCTCCCATTTCTT
TGAAACCTTCTCCCCCTCTTCTCTTTTCTCTCAATTTCTTAATATTTGGATATTTGGATGTATCC
TGAATTAATCTTTAATCTTTAAATTTTCTCTTCTGTTGATCTTTGCTTTGAGTCTTTTCTCTCTT
TAAAAATAAACAAAGGCCAGCTAGGCACAGTGGCTTATATCTGTAATTCAGCACCTTTGGGAGGCTGAA
GCAGGAGGATCGCTTAAGCCCGGAGTTTGAGACCAGCCTAAGCATCGCAGCAAAACCTCATCTCTACA
AATGATTTAGAAATTAGCAGGGCCTAATGGCTCATGCTGTGCTCCAGCTACTCAGGGCTGAGGCAGG
AGGATTAATGAGGCTGGCAGTTGAGGCTGCTGCAGTGAGCTGTGATCGCACCCAGCTACTCCAGTCT
GGCAACAGAGGGAGACCTCATCTCAAAAATAAATAGGCCCTGGTGGTGGTCACTCCTGTAATCCCA
GCATTTGGGAGGCCAAGGAGGTGGATCACTTGAAGCCAGGAGCTCAAGACCAGCCTAGCCGACATGG
CAAAACCTCTGTCTACCTACTAAAAATAAAAAAATTAGTCAACGTTGTGGCATATATACTTGTAAATCCC
AGCTACTTGGGAGGCTGAGACATGAGAAATGCTTGAACCTGGGAGGTGGAGTTGCAGTGAGTCAAGTC
CCTGCACATAGCCTGGGGAACAGAGTGAGACCCGAGACTCTATCTCAAAAAAATAAATCAGTGACAA
GTAAAAAGGTAGAAATACCTTTTCTTTTCTTTGAGACAGTCTCACCTGTGCCCCAGTCTGGAGTGCA
ATGGCGCAGTCTCGGCATACCTGCAAACTCTGCCTTCAAGGTTCAAAACAATTTCTCCTGCCTCAGCCTCCT
GAGTAGCTGGGATFACACATGCCACGACACACCCAGCTTTTCTGATTTTGTAGTAGAGACAGGTT
TCACCATGTTGGCCATGCTGGTCTCGAACTCCTGACCTCATGATCCACCTGCCCCGGCTCCCCAAAGTG
CTGGTATTACAGGCGTGAGCCACTGCGCCAGCCTAGAAATACCTTTTAAAAATAAATAAATAGGCCGGG
CGCGCGGCTCATGCCTGTAATCCAGCACTTTGGGAGGCTGAGCGGGCAGATCAGGAGTCAAGGAGA
TCAAGACCCCTCTGGCTAACATGGTGAACCCCATCTCTACTAAAAATAAATAAATAAATAGCTGGGC
GTGGTGGCAGGTGCCCTGTAGTCCAGCTACTCTGGAGGCTGAGGCAGGAGAAATGGCGTGAACCCAGGAG
GTGGAGCTTGAGCCGAGATTGCGCCACTACACTCCAGCCTGGGCAACAGAGCAAGACTCTCTCT
CTAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAA
TTTCCATTTATAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAA
TCATACTTGCTCTTTGTTTAGTAAAGAGCTGCTGTATTGAAGGATATACCTTAATCTCTTTATCCAGT

Z

FIG. 16B(26)



09/20/99, 11/17/00

217/223

A'
 ACTTAAGCAAAACCCACCTCAGACTTCTGAGTAGCTAAGGACTATAGCGCATGTCAACAGCCAGCT
 AATTTTAAATTTCTCAGAAACAGGGACTCACTGTGTGCCAGACTGGTCATGAACCTCCTGGCCTCA
 AGCAGTCCCTCAGCCTTAGCCTTCCAAGCACTGGGATTATAGGCATGAGCCAGGCCGCAACACATAT
 TGTATCGTTCCTGTAACAAGCTGTTGCAGTCTATTGATATATTCTTATTTTCTTATTTTCTGATTT
 TCTCTGTCTAGATATTCTCAAATTAATCTCTAAATGAGATTGATCTATGTTTTTCTTGTGTGATT
 CTTTTTGATAAGTTTTAGTTTTTAGTGTGTTTTGCTACATGGAAGGATTGAAAGTTTACACTAA
 AAAATATGCTTTTTTTTTAAAGACAGGCTTTTTTCACTGTGCTAGTGGAGTGCAGTGGCATGAT
 CTCGGCTCATGCGGCTGCACCTCCTGGCTCAGGTGATCCTCTCACCTCAGCCTCCCAAGTAGCTGG
 GATTACAGGTGTGTTCCACCATGCCAGCTAAATTTTTTGTATTTTTTGTAGAGATGGGTTTTCGCCAT
 GTTGCCAGGCTGGTCTTGAACCTCCTGGCTCACATGATTCTCCTGTCTTAGCCTCCCAAGTGTAGG
 ATTACAGGTGTGAGCCACCACATCTGGCCATTTCATTCATGTTTTCAAAATGATTTGAATGAGGAAAG
 TTCTCCCTTGTGATTATTTATATAATAGCCTACAGAGCTATTAAATTTTAAATTTTGTATTACTTTATG
 TCTCCTTTTTTTTTTGTAGGCTGAATAACCATTTATTTTCATAGGTTTATGCTTTTTTCTTCCAA
 AGAAGTTGCTATTGTGCTATTATAGTCTTTTTTATGTTTACGTTTTCTATTTTCACTGTTTAACTTTCT
 ACCTTCTTAGATTATTTTTTGTCTTTTTCTATCTTCTGAATTGAGTGTGCTTTTAAATGCTTTCTTC
 CAGTTAATTAAACATATTAGTGTGTAATTTGAACAAGCACAGCTTTAGCCACATCCCATAGGTGTT
 TCTATAGGCAAGTTGATTAGGATGGCTATAAGCTGCTCTGACAAAGATACCAAAATTCAGTGACTTAA
 ATAGACCACAAAGTGTCTTCTCTCCCAAGTTACATTCCAGAGGTAGACAGGCTTCTGCTCAGTAGGG
 ACCAAATTCCTTCTTGTGGCCTGCCATCCTAACATATTGCCCTTATCTGTTTGGTTAGAGATA
 GTTCTCACCATTTGGGTTCTAGTTCCAAACCACTGCGAAGGACAAACAAAGGCAATAGGGCCATTCTCT
 TCCAAAGATGTGACCTGGAAGTTACTCACATTGCTTTAGCTCACATCCCGTTGGCTAGAAATTCATCAC
 ATGACCACACCTAGCACAAAGGAGTCTCAAATATAGTCTGCCAGGAGAGCTTGGTGTCAAGCTAAATA
 CAAAGGTTCTGTATCAAGGCAAGAGAGAAAGAGACTGATCTGAGGGGAGGAGAGTTGGCAGGTTCTGT
 CACAAACTTCTCGTCAATGTTATTTTAAAGGTAATTTTCCATTTTGGGTTTTTGTGTTGCTGATTTT
 TTTTTTTTTTTTGTAGATGGAGTCTCGCTCTGTTGCCAGGCTGGAGTGCAGTGGCTGATCTCTGCTC
 ACCGCAAGCTCTGCCCTCCTGGTTCAGGCCATTCTCCTGCCCTCAGCCTCCCAAGTAGCTGGGACTACAGG
 CGTACACCACACGCTGGCTAAATTTTTTTTTTGTATTTTTTATTAGACACAGGTTTCACTGTGTTACC
 CAGGATGGTCTCATTTCTCCTGACTTTGTGATCTGCCCACTTCGGCCTCCCAAGTGTAGGATTACAGG
 CGTGAGCCACCGCGCGGCTGTTTGTATTTTGTAGATGGAATCTCACCTGCCCCCTTCTGGAG
 TACAGTGGTGTGATCTTGGTCACTGCAACCTCTACCTCCAGGTTTAAAGCAATTTCTTGTGCTCAGC
 CTCCCAAGTGTGCTGGATTAAAGACGTGAGCCACTGTGCCAGCCCATTTTGGTTTTGATTTTTTTTTT

B'
 FIG. 16B(28)



09720552 . 100702

218/223

B'

TCTTTGAAATAGAGTCTCGCTCTGTTACCTAGGCTGGAGTACAGTGGCATGATCTCGGCTCACTGCAAC
CTCCCCCTCCTGGGTTCAAGTGATTTCTCGTGCCTCAGCCTCCCAAGTAGCTGGATTATAGGCACCCAC
CACCACGCCAGCTAATTTGTTGATTTTATAGTAGAGACGGGTTTACCATGTTGGCCAGGCTGGT
CTCGAACTCCTGACCTCAGGTGATCCACTGCACCCGGCTCATTTTGGTTTGGTTTATTTTCAAAT
GTTTCTTACTTTGTCAATTTCTAATTTTATGCAATGGGACAAAAGAAATATTGTAATCTTTCTACTGT
TGGGGTTTATAAGGCTGTGGATATTTCACTCGCCTTTGAAAAGAAGGTTTCTCTGTAGTCTGTAGA
GTTTGGTATGTACCAATTAGATTTTATTAATTAATTTTGGTCTTTTGTATCCTTACTTAATTTTGTG
CTCTTGAATTTTAAATGGAGCAAAAGACATAAAGTCTCTAATAACATGCGTTCTGTTTGCATTTCTCAT
CTTTTATGAATATTGATGCTGCATATTTGTGTACCCAGGGAGAGGCCAGACCCACTGTCCAAAGTTT
AGTGAATCTGGCAGCCTTGTTCAGTTGTTGGAGGATGCCCTCATGGAGGAAAGCATTCCTAATCCT
GGAGCTTGTGTTGTACTCTAATTTGAATTTGTAATGTGTTTCTTAACTGAATGAATGTTTCTATTT
TTTACTTATTACACAGGTAACTTCTGACTCGAAGGACAGAGAGGTGAGCTGCTCACCTTATATCTGTTG
TTCCCTTTTACACAGTGTACAGTATTCATTTATTTCTCTGCTCACAGTCTGTGGTAACCGTGTGCATCT
GTGGCTGTGTTGTTTACTTTCCCTTAAAGTTATTTCCATGTTAATCTCATGGAGAGAGCAATAGA
AACAAAGTACTGTATTGATGTTTCTTAAATATAGACTATGGATTCTAACAGCTATGATGATTTTAAAC
AAGTAACAAATATATCTTACTTTGACATGTCACTTTGTTAAACATTAATTTTGGTGATATTAGGTCA
AATTTCTATACCATTAGTTACTTCTGATTTCTAGGCCACAGTCCCTTTAAATATTTCTTGTGTTGTTT
TTCCCTTAGTGATAAAATGTCAACCTTTTGGCTTATATGGATTTTATGGATTTTCAGCCCTTAA
TGTAAGTCTCTATGGCCTGAGATGTTGTGCTGTTTAAAGCTGGACTGCTGAGTCCCTGGTCACTA
GAGAGTAGGGGACATGGGTACTTGTCTGCAGAAAGTGTGGCACATTTTGCCTAGAATGACAGTAAGCT
GCTATCAAAGAGCATGAGAGAAAGAGAGATCATCTAACATTTCTAAGAGTGATTTATACATTTGA
GTTTAAATGTTACTATTTCGAAGCAGTGTGTTTATCATATTTTCTATTTTATCAAATCAGACTTGA
GTTTCTTCTGATTCTGTTTAACTTAACTTAACTTAACTTAACTTAACTTAACTTAACTTAACTTAACTT
GAGGCATATGAAGTCCCACTAAGTAGGGAGCATTTGAGTCAGAAAAGTGGGTACTCTCTTCTTATGT
GATGTCATCTGCCATTTGTTGTAAGGAATAGTGAAGTGTACCATACTGTGTACAGATTTCCCTC
ACTTTTCCACCTCTCACTTTCCCTAACTTGGAACTAAACATTTGGATTAAATACAGTGTCTTGTGCTTC
AGATTCACTTGGCAGATTTTATCAAAATGTAGACTTAAATAGGTTTATTTGTGATAGATATTACTTGCT
CCCTAAAACTGCTCTCTTAAACAGCCTTACAATAAAGTCAAAAGTCAAAAGTGGTAGGCTTCAAGATGAA
ACATAAGATCTGTTGACTCCTTCTCTATTATAGTATATATTTTCAATAATTCAGCCTTTTCTTGCCCC
AGATATCATATCTATTTTACCTACCAATATTAAAGTAGTTTCCATGTTGTGATTAAGAAAAACAAAT
ACCATAAATTACCTAGATTATTGCTAATTTGTGACATATGTAAAGTCTATTAAATGTAATAATCTCCTTTC

C'

FIG. 16B(29)



09/20/02 11:27:02

219/223

C'

TTAAGTCAAAAAATAATTTTGTGTAATTTCCAAACAGGAAACTGAAAAGGCATAGGTATTTCTCAGCAGTC
TCTAAAGTCCCAAAATCTAATGGCAATTTTACCAGAGCAGATCTTTAGAAAGTATTGCTATATAAATTTGGA
TATCCCATTTCTAATTTTAAGCCAAATGCTTTTGAAGAAATAAGCCAGCTGTTTGGAAATGCTTGTATTA
TAATCGGTTTGATAAGCAGTTATGTCTTATGCAGATGAATAGGGGTACCTGTTTTTATGCACTGGTC
TTTGGGGTGCTTTTGAACAGTAGTGTCTGATGTTTTTAATTTGTCAAAGCAAAAAGAAATGAGAGGGAGGG
CAACTTTTCTCCTCTTCTGAATTTCCAGGAAACTGGTTATTTTCTCATGCCATATGATTTTAAAAATATA
TTCCCAGCCAGGTGCAGTGGGTACGCTTGTAATCCCAGATTTTGGGATGCCAAGCGGGGGGA

Contig 9 (7505 bp)

TCCGAGCTCCACGCGGTGGCGCGCTCTAGAACTAGTGGATCCCTCTGGTGGCCATTGAGAATCAAA
ACTTGCAGTGAGTGACTCTATAAAATGGAAATTTGAATCAAGTCTGAAAATGATCCACATAGTTCTACA
GCAGGCTGGACACCGTGGTCAGGACCTCAATATATTCTGCTTCCACAGAAATTCAGACAGTTCAGAGTT
TGGTGAATTAACCTCAAAGGCAGCAAGATATCTGTCCCGGAGTCAGCAGGTAAAGCATAGCAGAAATGG
CTGGAGCAGCGGGAGCCTGCTTCCCTTCTGTTGGCTGTAGCGTCCACTCCATTATAGCTCCTGATGGA
AGATTTCTACAGAGTGATGCCCTCAGAAATCTTCCCTTATACCTTTCTTCCATGATCCTTGACCTCTTTT
CTAGATTTGCCACATTTCTTATGTGCAAGTAACTAGATATACATTATCAGACAAGTAGCAGACCTGCA
TATATCCACTTCCCTACTTTTCCATAAATTTCTTACCTGAACCTCTATCATTTCTTCTTCTGTGTT
GACTCTGGTGTAAACCTTGACGGCAAGTTGAGCGTGGGTTTGGTGTACAA: TGAAGGACTAAGGGAATA
GTTAGCCTTCTATTTATTAACAAATCTTCCCTTTGATGTCTGGATCAGTGTCTCTCTAATAGGAATAT
TGGCATGTTAAGGCAAGAACATATGCTTATTGAGTGTGACTGATTGGGGTTAATACTAATTTGATAC
TATTAAGGTGTGGGCCCCAGGAATGCCAAATTTCTACCTCAATGTAGAGCCACCATTCCCTTGAGGTA
ACCTAGGTGGGATAGATATACGTGAAGGCTAATGGAAGATAGGGAATCAAAGTATCATTATTTT
TATTTTATTTTATTTAATTTTGTGAGATGGAGTCTTGTCTGTTGCTAGGCTGTAGCGCAGTGGC
ACAATGAAAGTATCACTTTATTATCTGAGCTTGTGCCCTAAACTTCACTGCAGAAATATGCTGGTAA
AATGGACTGGATTACAGGATTTAGAGGCAAGGTCCACAGGTCAAGGATAAGAGGTAAGAGGGAATCTT
TCTCTCTTCTTAAGCCCCAAACCTCCATGACAAATTGAGATTTAAAAAATAAACTGATGAGAGAA
TCCAAAGCACAGTTGATCAAGAGGAAAGAGAAATGATGATGTTTCCCTCTTTCTTTTTCATGAGAAAGT
GGCTCTCTTATGATCGGCTACTTGATTAGAGAAACAGTGGGGGAAAGAACTGCCATATCCACATGTGC
AATTTTAAACACACAGTGATTCTGAACACTAGTATAAATTTCCAGTCAGTGTCTGCCCCATCTGAC
TACTCAGGTTATAATACCTAATTTTACAGGGAGTTGGGAAGTGTGCCAAACCTGTAGAAGTCTATAT
CTACTGTATTCAGATTTTATATGCATTATTTTATATAACCTTTTGACCTCTCTCCTCTATCATCACTTG

D'

FIG. 16B(30)



097100555 : 122702

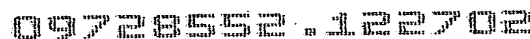
220/223

D'

AGTGATTTCATCCAGCGTCATCATTTAACATATTTTAAATAAATCTATATACTGATAATTCACCAATTT
ATATCTCCATCCCCGATTGTTCTCTAACCTCCAGCCTCTAATATCCAACTGCCTACTCAAGCCTCAGC
AATGGTGAGCGCCCTGCCAGCCTCGCTGCTGCTTGCAGCTCGATCTCAGACTGCTGTGCTGGCAA
TGAGCGAGGCTCCGTGGCGTGGACCTTCCGAGCCAGCGCAGGATATAATCTCCTGGTGTGCTGTCT
GCTAAGACCGTTGGAAGAAGCACAGTATTAGGGTGGAGTGACCCCAATTTCCAGGTGTGCTGTCTCACA
GCTTGTGCTGCTACGAAAGGAATTCGCTGACCCCTTGCACTTCTCTGGTGAGGCAATGCCCTCGCCCT
GCTTCGGCTCATGCTCAGTGGCTGCAACCCACTGTCTGCAACCCAGTGTCCGACGAGCCCGAGTGGGAT
GAACCCGGTACCTCAGTTGGAATAACAGAAATCACCCGCTTCTGTGTCCCTCATGCTGGGAGCTGTAG
ACTGGAGCTGTTCCATTTGGCCATCTTGGAACCTGCTTGCACTTTCAGTTTAAATATCCAACTGCCTAT
ACGATATCTTCACTTGGATTTTGAATAGGCATATCAAACTTGTCACTGTTCAAAAGTGAGGTTCTAATCT
TCCCTCCCAAACTGCTTCCCATGGCTTCCCATCTCAGTAAATAGGAATTTTCATCCTTCCAATTG
CTCATGCCAAAAATTTGGGAGTTATCCTTGACTCTTCTCTTCTCACACCCACATTCATCCATCACC
ACATTTCTGATGCCCTCTATCTCAAGATATACTTAGACTTTCACCACCTTTCCTCACTCTGCAATTAACA
CTTTGGTCCAAAGCCACTGTATCTCTTCTTGGATTTATGTAATAGCTTCTTAATAATTTGTCCCCCTT
CTTCCACCTTTGTTTCCCTACAGTATAATCTTAACGAAGCAGCCAGAAATGGTTGCCTACAAACCTTTA
AAATGGTAAGCCAGAACATGTAGGTATATTCAAAACCTTCCAATGGCTTGTCACTGGAACATAAAGTCTC
TACATTGGCCTATAAGACCCCTATGTCTATACCCCTAGTCTCCTCTTCTAACTTCACTCTCCTGCTAT
GCTGTCTTCAACTCACTCTGTCTCCAGGTGCTCTGGCCCTCTCAAAACACACACACACTTGCAGCTC
ACAGTCTTGGCACTTGTCTGTCTCTCCTCTAGGACCTTCTTCTCTCAACTGTCTGGTTCAACCCACCC
TTCTCTCTGGATTTCTGCTCTGATGTCTATTTATCAGTGGGCACTTCCCAATTTCTCTATTTAAGACCA
CAATTCAGGCCAGGGTGGTGTCTATGCTGTAATCCAGCACTTTGGGAAGCCGAGGTGGGCAGATC
ATGAGGTCAAGAATCGAGACCACTTGGCCAAACATGGTGAAACCCCATCTCTACTAAAATAACAAAA
AAATTAGCCAGGTGTGGTGGCACATGCCCTGTAATCTCAGCTACTTAGGAGGCTGAGGCAGGAGAAATCGC
TTGAACCTGGGGGCAGAGGTGTAGTGAGCCGAGATTGGCCACTGCACCTTCAGCCTGGGCAATAGAG
CGAGACTCTGTCTCAAAAAAATAAATAAATTTGCTGTTATTTCTCTATACTATTTTGTAAAGCAAGGAC
CTTATTATTTCTCTGATAAATACCTCTCACACTTTATAAATTACATAATTTGACTTTTGTGATTAATGAAT
ATCCCTCCTTTATAGCATAAATTCACAAAGAGCAAGGATTACATGTCTGCTTCATTTCACTGTACACC
TAAAGCTAGCACAGGGTCTCACACATAACAGGCACAAAAACAATGGATTACGTTGAGCCAAAGAA
CAAAAAAATAAGTAATTTATCACTAAATGTCTTTGTTAAATTCACACACAGGGGCGAGTATATCAGG
TATTATAAGAAAGTAATTAGGCACATCCAGCACTTTGGGAGGCCGAGGGGTGGATCACAAAGGTGAG
GAGTTCAAGACCAGCCTGGCCAATATGGTGAAACCCCGTCTCTGCTAAAAATAACAAATTAGCGGGTGT

E'

FIG. 16B(31)



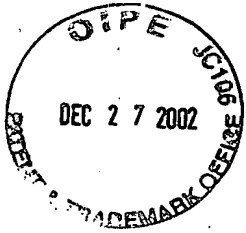
221/223

မ

GGTGGCACACCCCTCTGGTCCAGCTACTCAGGAGGCTGAGGCAGGAGAATCGCTTGATCCAGGAGGC
GGAGGTTTCAGTGAGCCAAGATCGTGCCACTGCACCTCAGCCTGGTGACGGAGCGAGACTCTGCCTCA
AAAAAAAAAAAAAAAAAAGAAAGAAAGTAATTAGGCACCTTTGGCTTAAGACACTGGGCTAAATCC
ATGAATTTACTTTCATCTTCCCCCAAAGCACACATGACATGGTAGAAAGAAATATAAAAAATACTAATGAATC
AACAGCATATCTGAAGGCAGCAACCGGTGGCATATGTAGATCAGAAATCTTTGAGAGATTTCTGGAAGA-
CAAAACAGACCAGACTCGATGTCCAAGAGATCAACAGAGCCAAAGAGCCTCCAGCTGAAAACTAAGTA
CTAGTTCTACCAGTTTGGGCCCTGGAAACACCTCAAGCTCAGAGGGAATTGGGACTGGGTTGAAAGTGG
ACCTTGAGTACCAGATGGTACTTAAGCAAAAGGCCTGCCAACCCAGCACCATACACCCACAGCCCAA
ATGACAAAGGGGCTTCCCATCTAGACTCAGCTGGA AAAACAGTGCCTACACAGAGTAGAGAGTTTGT
CACAGAGACTGGTAAGGGCTTCTTTTACAAAACATATGCTGCATATATATTTTCTCAACGTCACACT
AATGACATTTTGGGCTATACAAATCTCTGTTATGTGGTCTGTCACTGTGCATGTAGGACATTTAACAA
TATCCCTAGCCTCTAAATTATTAGATGCTGTAGCAAAATCCCAATTTTGATGACCAAAAGTATCTCCAA
GCATTGCTAAATGCCCTTTGTGGGGAAATAGCCCCAGTAAGGAAACCACCTGGTCTATACTCAGGCCATT
CTAACTGAATCTTTTAAGGCAATCCGAGACCTAGCATTTCAAATGCAATTACTTAGGTATGTATCAC
CAAGAGATCAAGATTTCTTAACATAAACATAATACTATTATCCAATTTAAAAAGTAACATAATTCCTTA
GTATCATCTAATATTATTCAGTTACTGCTTGAATTTCCCTGAGTGTCTCATAAATGCTTTTTTTTTTGT
TTGGTTAGAATTGACACCCAGAGCAGGTCTACACTGCATATGATTGTTAAGTATATTGGGTCCACAGAAG
GTCTCCTGGGGCTGCAGACAGAAAAAAACCATAGTAGTCCCCAAGCTAATTTAGGCAACCACAAAGAG
AGGAAAGGAAAAAAGAAACGGCAGCTCGCCTAGAGGATAACTGCACCCTGCCCGATTTCCTGAGCCA
TCACTGAACCCCTTCCCTGGTTTAGGACGTATGTCCATGTTTGTCTTGAAGGGATGAAGGGACACCTA
TTGTGAGCACAGTCTAAGCCACTCAATGGTCCAGGGCATAGCTCAAAACAGAGCAACAGTAGCCCTGGGA
AATGGAGGTGACAAAAGAAACAGATAAATCTTTCAAAATATACTGCAATTTGTGCAACAGGATGCCAT
ATTGATTTAAAAAATTTTTTTTCTTAAATTTTTGTAGAGATGGGGGAGGGGTCTTGTGTTGCC
AGGCTGGTCTTGAACCTCTGGTCTCAAGTGATCTTCTTGCTTGGCTCCCAAAATGCTATGATTATGT
GGGTGAGCCACTGCTGCATTGCGTTTTTTTTTCTTTCTCGAGACGGAGTCTCACTCCGTCACCCAGGC
TGAAAGTCACTGGCGTGATCTTGGTTCACTGCAACGGCTCCTGGTTCGAGCGATCCTCACACCTTAGC
CTCCCTAGTAGCTGGAACTGCAGGCCCTGGCTAAGTTTTGTATTTTTTAGTAGAGACAGGGTTTCACTATG
TTTGCCAGCCTGGTCTTGAACTCCTGACCTCAGGTGATCAGCCTGCCCTCAGCCTCCCAAAAGTGTGGGA
TTTATAGGTGTAGCCACTGTGCCAGCCTACATTGATATTTTTTAAAAAGCCACTATTAAAAAAGGAGTA
ATCTGAGTAGTAAGAAGGAGTTCTTTAAAAACTGGCCGGCATGGTGGCTCAGCCTGTAATCCCAACA
CTTTGGGAGGCCGAGGCAGGCAGATCACCTGAGGTTGGTAGTTTAAAGAGCAGCCTGACCAACATAGAGA

၂

FIG. 16B(32)



09728554 . 122702

222/223

F'

F'

AACCCCATCTCTACTAAAAATACAAAATTAGCCAGGTGTGGTGCCACATGCCTGTAATCCCAGCTACTC
TGGGGCTGAGGCAGGAGATCGTTTGAACCTGGAAGGCAGAGGTTGCGTGAACCGAGATCGTGCCAT
TGCACACCAGCTTGGGCAACAAGAGCAAACTCCGTCTCAAAACAAAACAAAATGAAAAACAAA
CAAAAAACACCAACATGATTAGGAGGAAAAAATCTAGATAGAAAGGCTTAAACAGGGCCGGCACGGT
GGCTCATGCCTGTAAAGCCCAACACTTTGGGAGGCCAGGTTGGAGGACTGCTTGAGGCCAGGAGTTTGA
GACCAGCCTGGGCAACTTAGCGAGACTCTGGTAGTCTGTCTTACCAAAACAAAACAAACACCTGAT
TAGCTGGGCATGGTGCCATATGCCCTATAGTCCCAGCTACCCGGGAGGCTGAGGCTGGAGGATCGCTTGA
GTCCCAGAGGTCAAGGCTGCACTGAGCTGTGATCAGGCCACTGCACCTCCAGCCTGGCGACAGAGCATG
AGTCTGCCCCAGCCTGCCTCCAAAAAGAAAGGCTAAATAGGAGAACTGATATAACTGAAAAACCAAA
TTAGTTGTGTGAAGAGCAACTGTCTTGAAGCTCCAGAACACAGAGCAATAAGAGATGAAAAATATG
ACAGCATAGAAAAGAAAGGAAGTGGATAGGTTCCAGGAGATCCAAATACCTGTGCAACAGGAGATCCAAA
GAAAGAACCCAGTAAGAGGAGAGAGTAATAACAAGAAAGTTCTTGAGTTATCAGGCCCAAAAGAAATAA
TCTAGTTTGTGGAGTAATATTGACAAAAAATCTTTACACCTAGATGTATTCTGAAAAAATCTTTAAAT
TCTAATTGAAATCAACCAACGAAACCAAGCCAGCCCTAGAAAAACCAATTTCCAGGGCATGGGTTTTAG
GGTCTGACAGACCTGAAAGTTCAAATTCCTACTATCCTAACTTACTAGTAGTGTGATAATCTCTTAGAAC
AATGTATGAAATGGAAGCATAATAGCACCCCTCCACCTTTTAGAGTTAATGGGAGATCTAAAAAGAGGTAA
CATTTGCAAAAGTGTCTGACATGAAGGGAAGAGATTGGCTTTGGCATCCACAAGTTCAACACACTAGCAGA
GAACCTCAGTCCAGCTTCCTACGCTCAGGCAGTTCTTTGCCTAGAAGAGGGTCCGCAACTATAGCCC
AAATTTAGCCCCACTGCCCTGTTTGTAAATAAAATGCTATCAGAACATGGCCATGTTTCAATTCATTACA
TACCATCTATGGCTGCTTTTACATTACAAGGCAGAGCTGAGTAGATGAGACAGAGACAGTATGGTTAC
AAACCGAAACTGTTTCAACCCCAACTTCATTCAGCAAAAGTTTACTTTCTAGATTGAGGCCAGGAGC
AAGCATGAAATGAAAAACCACTAAAATGGTGTCCCGGACACAGATACCTACTTGCTATAACTTCTTT
CCTTGAAACAAAGGGCCATATTAAATTGAAGGGCTCACCTCTAAACAGGTGAGTGACTTAAGGACTTCA
GACACACACTGGTCAACTACAAACTAGTCAGTAAAGGAATAGCCATAGTCTATAGCCCCAGTTCCTAT
GGCCAGGGGGATCCACTAGTTCTAGAGCGGCCGCCACCGCGGTGGACTCCAG

G'

G'

FIG. 16B(33)

ॐ

Contig 15 (529 bp)

GCTGAGGTGCATCGCGGTGGCGGACGCTCTAGAACTAGTGGATCCCAAAACCTGTCCCTGCTAA
 TTGATGTTAGACCCAATCAGATCCCCGGAGAAAGCCGAAATACGGAAACCATATCAGCATACGCATGGCAT
 ACATAGAAACCCCATACATGGATTGCTTACTCAGCCAGATATAGAAATCTATCTTACGATAGAGATATA
 TATATATAGACACACTGCATATACAGATGTGAGATGGAGGCTCACTCTGCCACCCGTGCTGGATCTACA
 GTGGCACAAAGCTCAGTCCACAGTCACGTCGATCTGCCGGGCGTGACCGACTGAGATGCAGCGGCTCGG
 GCGTAGCTGTGAGTACAACGACCAAGTCATCGCGACTGGCTGCAAGTGGTATAGCGGAGGGGACAGGGT
 TACAGCATGACGGCTAGGCAGGCCGCAAACTGAGGACCACAAGATGCCACGCTGCCCCGAACGCATGCA
 GTGGCGAGATTACATGGGGCAGCCACTAGAGCCGCCGTATCAGAAA

Contig 33 (635 bp)

TACACGCGGTAGCGCCGCTCTAGAACTAGTGGATCGGGTAATCCAGCACCTTTGGGAGGCCAAGGAGGG
CAGATCACCTGAAGTCAGGAGTTTGAGACCAGCCTGCCAACATGGTGAAACTCCATCTCTACTAAAAAT
TACAAAAATTAGCCGGCGTGTGGCGCATGCCTGTAATCCCAGCTACTCGAGAGGCTGCGGCATGACA
GTCACTCAAGCCCGGAGTAGAGGTTGCAGTGAGCTGAGATTGTGCCACTGCACCTCCAGCCTGGGTGG
CAGAGTGAGACCCCTGTCTAAAAAATAAAAAAAGGCCCATTAGGGGACCCAAAAAGGTTCCCCCAGC
TTTTTGTGGATTCCCCCAAATTTGGGGCCAAATTTTGGAGGGTGTCCCTTAAAAAATTAAATTTGGGG
TTTTTTTCCAGGCGCCATTAGAAATGGGTCCGAAAATTTTGGCCAAAAAAATTTGGTTTAAACCCG
GGACCAAAAATCCTAAGGTTAACTTTTCTAAACCTTTTAGAATTTAAAGTTTCGGGGTTCTCAGG
AGGGGGTAACCCCTTCACCCCAATATAACTCGGAAACCCCCCTTTTTAGGAAAAAGGGGAATTAGTGGTG
CTTTCGGGGCCAAA

Contig 39 (938 bp)

[illegible]

FIG. 16B(34)